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LECTURES

ON

THE PHILOSOPHY

OF

THE HUMAN MIND.

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OF

THE HUMAN MIND.

175

BY THE LATE

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LECTURES

ON THE

PHILOSOPHY OF THE HUMAN MIND.

LECTURE I.—(INTRODUCTION.)

GENTLEMEN,

THE subject, on which we are about to enter, and which is to engage, I trust, a considerable portion of your attention for many months, is *the Philosophy of the Human Mind*,—not that *speculative* and *passive* philosophy only, which enquires into the nature of our intellectual part, and the mysterious connexion of this with the body which it animates, but that *practical* science, which relates to the duties, and the hopes, and the great destiny of man, and which, even in analyzing the powers of his understanding, and tracing all the various modifications of which it is individually susceptible, views it chiefly as a general instrument of good—an instrument by which he may have the dignity of co-operating with his beneficent Creator, by spreading to others the knowledge, and virtue, and happiness, which he is qualified at once to enjoy, and to diffuse.

"Philosophy," says Seneca, "is not formed for artificial show or delight. It has a higher office than to free idleness of its languor, and wear away and amuse the long hours of a day. It is that which forms and fashions the soul, which gives to life its disposition and order, which points out what it is our duty to do, what it is our duty to omit. It sits at the helm, and in a sea of peril, directs the course of those who are wandering through the waves." "Non est philosophia populare artificium, nec ostentationi paratum; non in verbis sed in rebus est. Nec in hoc adhibetur ut aliqua oblectatione consumatur dies, ut dematur otio nausea. Animum format et fabricat, vitam disponit, actiones regit, agenda et omittenda demonstrat, sedit ad gubernaculum, et per ancipitia fluctuantium dirigit cursum."*

Such, unquestionably, is the great practical object of all philosophy. If it increase the happiness and virtue of human kind, it must be allowed to have fulfilled, to human beings, the noblest of earthly ends. The greatness of this primary object, however, perhaps fixed too exclusively the attention of the moral enquirers of antiquity, who, in considering man as capable of virtue and happiness, and in forming nice and subtle distinctions as to his *supreme good*, and the means by which he might attain it, seem almost to have neglected the consideration of his intellectual nature, as an object of mere physical science. Hence it happens, that, while the systems of ancient philosophy exhibit, in many instances, a

* Ep. 16.

dignity of moral sentiment as high, or almost as high, as the unassisted reason of man could be supposed to reach, and the defects of which *we* perhaps discover only by the aid of that purer light, which was not indulged to *them*, they can scarcely be said to have left us a single *analysis* of complex phenomena of thought and feeling. By some of them, indeed, especially by the Peripatetics and Stoics, much dialectic subtilty was employed in distinctions, that may seem at first to involve such an analysis; but even these distinctions were verbal, or little more than verbal. The *analytical investigation* of the mind, in all its complexity of perceptions, and thoughts, and emotions, was reserved to form almost a new science in the comprehensive philosophy of far later years.

If, however, during the flourishing periods of Greek and Roman letters, this intellectual analysis was little cultivated, the department of the philosophy of the mind, which relates to practical ethics, was enriched, as I have said, by moral speculations the most splendid and sublime. In those ages, indeed, and in countries in which no revealed will of heaven had pointed out and sanctioned *one unerring rule of right*, it is not to be wondered at, that, to those who were occupied in endeavouring to trace and ascertain such a rule in the moral nature of man, all *other* mental enquiries should have seemed comparatively insignificant. It is even pleasing thus to find the most important of all enquiries regarded as truly the most important, and minds of the highest genius, in reflecting on their own constitution, so richly diversified and adorned with an al-

most infinite variety of forms of thought, discovering nothing, in all this splendid variety, so worthy of investigation, as the *conduct* which it is fitting for man to *pursue*.

But another period was soon to follow, a period in which ages of long and dreary *ignorance* were to be followed by ages of futile *labour*, as long and dreary. No beautiful moral speculations were then to compensate the poverty of intellectual science. But morality, and even religion itself, were to be degraded, as little more than technical terms of a cold and unmeaning logic. The knowledge of our mental frame was then, indeed, professedly cultivated with most assiduous zeal; and if much technical phraseology, and much contention, were sufficient to constitute an elaborate *science*, that assiduous zeal might well deserve to have been rewarded with so honourable a name. But what reasonable hope of a progress truly scientific could be formed, when to treat of the philosophy of mind was to treat of every thing *but* of the mind and its affections; when some of the most important questions, with respect to it, were, Whether its *essence* were distinct from its *existence*? whether its *essence* therefore might subsist, when it had no actual *existence*? and what were all the qualities inherent in it as a *nonentity*? In morals, whether ethics were an art or a science? whether, if the mind had freedom of choice, this independent *will* be an entity or a quiddity? and whether we should say, with a dozen schoolmen, that virtue is good, because it has intrinsic goodness, or, with a dozen more, that it has this intrinsic goodness, because it is *good*?

In natural theology, questions of equal moment were contested with equal keenness and subtilty; but they related less to the *Deity*, of whose nature, transcendant as it is, the whole universe may be considered as in some degree a faint revelation, than to those spiritual ministers of his power, of whose very existence nature affords no evidence, and of whom revelation itself may be said to teach us little but the mere existence. Whether angels pass from one point of space to another, without passing through the intermediate points? whether they can visually discern objects in the dark? whether more than one can exist at the same moment in the same physical point? whether they can exist in a perfect vacuum, with any relation to the absolute incorporeal void? and whether, if an angel were in vacuo, the void could still truly be termed *perfect?*—such, or similar to these, were the great enquiries in that department of Natural Theology, to which, as to a separate science, was given the name of *Angelography*; and of the same kind were the principal enquiries with respect to the Deity himself, not so much an examination of the evidence which nature affords of his self-existence, and power, and wisdom, and goodness, those sublime qualities which even our weakness cannot contemplate without deriving some additional dignity from the very greatness which it adores, as a solution of more subtile points, whether he exist in *imaginary* space as much as in the space that is *real?* whether he can cause a mode to exist without a substance? whether, in knowing all things, he know universals, or only things singular? and

whether he love a *possible* unexisting angel better than an actually *existing* insect?

"Indignandum de isto, non disputandum est."—"Sed non debuit hoc nobis esse propositum arguta disserere,* et philosophiam in has augustias ex sua majestate detrahere. Quanto satius est, ire aperta via et recta, quam sibi ipsi flexus disponere, quos cum magna molestia debeas relegere?"†—"Why waste ourselves," says the same eloquent moralist; "why torture and waste ourselves in questions, which there is more real subtilty in *despising* than in solving?"—"Quid te troques et maceras, in ea quæstione quam subtilius est contempsisse quam solvere?" ‡

From the necessity of such inquiries we are now fortunately freed. The frivolous solemnities of argument, which, in the disputations of Scotists and Thomists, and the long controversy of the believers and rejectors of the universal *a parti rei*, rendered human ignorance so very proud of its temporary triumphs over human ignorance, *at length* are hushed *for ever*; and, so precarious is all that glory, of which *men* are the dispensers, that the most subtile works, which for ages conferred on their authors a reverence more than praise, and almost worship, would now scarcely find a philosophic adventurer, so bold, as to avow them for his own.

The progress of intellectual philosophy may indeed, as yet, have been less considerable than was to

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* Argutias serere. *Lect. var.*

† Seneca, Ep. 102. ‡ Ibid, 49.

be hoped under its present better auspices. But it is not a little, to have escaped from a labyrinth, so *very* intricate, and so *very* dark, even though we should have done nothing more than advance into sunshine and an open path, with a long journey of discovery still before us. We have at last arrived at the important truth, which now seems so very obvious a one, that the mind is to be known best by observation of the series of changes which it presents, and of all the circumstances which precede and follow these; that, in attempting to explain its phenomena, therefore, we should know *what* those phenomena are; and that we might as well attempt to discover, by logic, unaided by observation or experiment, the various coloured rays that enter into the composition of a sunbeam, as to discover, by dialectic subtilties, *a priori*, the various feelings that enter into the composition of a single thought or passion.

The mind, it is evident, may, like the body to which it is united, or the material objects which surround it, be considered *simply as a substance possessing certain qualities*, susceptible of various affections or modifications, which, existing successively as momentary states of the mind, constitute all the phenomena of thought and feeling. The general circumstances in which these changes of state succeed each other, or, in other words, the *laws* of their succession, may be pointed out, and the phenomena arranged in various classes, according as they may resemble each other, in the circumstances that precede or follow them, or in other circumstances of obvious analogy. There is, in short, a science that may be

termed *mental physiology*, as there is another science relating to the structure and offices of our corporeal frame, to which the term physiology is more commonly applied; and as, by observation and experiment, we endeavour to trace those series of changes which are constantly taking place in our *material* part, from the first moment of animation to the moment of death; so, by *observation*, and in some measure also by *experiment*, we endeavour to trace the series of changes that take place in the *mind*, fugitive as these successions are, and rendered doubly perplexing by the reciprocal combinations into which they flow. The innumerable changes, corporeal and mental, we reduce, by generalizing, to a few classes; and we speak, in reference to the mind, of its faculties or functions of *perception*, *memory*, *reason*, as we speak, in reference to the body, of its functions of *respiration*, *circulation*, *nutrition*. This *mental physiology*, in which the mind is considered simply as a *substance endowed with certain susceptibilities, and variously affected or modified in consequence*, will demand of course our first inquiry; and I trust that the intellectual analyses, into which we shall be led by it, will afford results that will repay the labour of persevering attention, which they may often require from you.

In *one* very important respect, however, the inquiries, relating to the physiology of mind, differ from those which relate to the physiology of our animal frame. If we could render ourselves acquainted with the intimate structure of our bodily organs, and all the changes which take place, in the exercise of

their various functions, our labour, with respect to *them*, might be said to terminate. But though our intellectual analysis were perfect, so that we could distinguish, in our most complex thought or emotion, its constituent elements, and trace with exactness the series of simpler thoughts which have progressively given rise to them, *other* inquiries, equally, or still more important, would remain. We do not know *all* which is to be known of the mind, when we know *all its phenomena*, as we know all which can be known of matter, when we know the appearances which it presents, in every situation in which it is possible to place it, and the manner in which it then acts or is acted upon by other bodies. When we know that man has certain affections and passions, there still remains the great inquiry, as to the propriety or impropriety of those passions, and of the conduct to which they lead. We have to consider, not merely *how* he is capable of acting, but also, whether, acting in the manner supposed, he would be fulfilling a duty or perpetrating a crime. Every enjoyment which man can confer on man, and every evil, which he can reciprocally *inflict* or *suffer*, thus become objects of two sciences—first of that intellectual *analysis* which traces the happiness and misery, in their various forms and sequence, as mere *phenomena* or states of the substance *mind*;—and secondly, of that ethereal *judgment*, which measures our approbation and disapprobation, estimating, with more than judicial scrutiny, not merely what is *done*, but what is scarcely *thought* in secrecy and silence, and discriminating some element of moral good or evil, in all

the physical good and evil, which it is in our feeble power to execute, or in our still frailer heart, to conceive and desire.

To this second department of inquiry belong the doctrines of general *ethics*.

But, though man were truly impressed with the great doctrine of moral obligation, and truly desirous, in conformity with it, of increasing, as far as his individual influence may extend, the sum of general happiness, he may still err in the selection of the means which he employs for this benevolent purpose. So essential is knowledge, if not to *virtue*, at least to all the *ends* of virtue, that, without it, benevolence itself, when accompanied with power, may be as destructive and desolating as intentional tyranny; and notwithstanding the great principles of progression in human affairs, the whole native vigour of a state may be kept down for ages, and the comfort, and prosperity, and active industry of unexisting millions be blasted by regulations, which, in the intention of their generous projectors, were to stimulate those very energies which they repressed, and to relieve that very misery which they rendered irremediable. It therefore becomes an inquiry of paramount importance, what are the *means best* calculated for producing the *greatest amount* of social *good?* By what ordinances would public prosperity, and all the virtues which not merely adorn that prosperity, but produce it, be most powerfully excited and maintained? This political department of our science, which is in truth only a subdivision, though a very important one, of general practical ethics, comprehends,

of course, the inquiries as to the relative advantages of different forms of government, and the expediency of the various contrivances which legislative wisdom may have established, or may be supposed to establish, for the happiness and defence of nations.

The inquiries, to which I have as yet alluded, relate to the mind, considered simply as an object of physiological investigation; or to man, considered in his moral relations to a community, capable of deriving benefit from his virtues and knowledge, or of suffering by his errors and his crimes. But there is another more important relation in which the mind is still to be viewed,—that relation which connects it with the Almighty Being to whom it owes its existence. Is man, whose frail generations begin and pass away, but one of the links of an infinite chain of beings like himself, uncaused, and co-eternal with that self-existing world of which he is the feeble tenant? or, Is he the offspring of an all-creating Power, that adapted *him* to *nature*, and *nature* to *him*, formed, together with the magnificent scene of things around him, to enjoy its blessings, and to adore, with the gratitude of happiness, the wisdom and goodness from which they flow? What attributes, of a Being so transcendent, may human reason presume to explore? and, What homage will be most suitable to his immensity, and our nothingness? Is it only for an existence of a few moments, in this passing scene, that he has formed us? or, Is there something within us, over which death has no power,—something, that pro-

longs and identifies the consciousness of all which we have done on earth, and that, after the mortality of the body, may yet be a subject of the moral government of God? When compared with these questions, even the sublimest physical inquiries are comparatively insignificant. They seem to differ, as it has been said, in their relative importance and dignity, almost as philosophy itself differs from the mechanical arts that are subservient to it. "Quantum inter philosophiam interest,—et cæteras artes; tantum interesse existimo in ipsa philosophia, inter illam partem quæ ad homines et hanc quæ ad Deos spectat. Altior est hæc et animosior: multum permisit sibi; non fuit oculis contenta. Majus esse quiddam suspicata est, ac pulchrius, quod extra conspectum natura posuisset."* It is when ascending to these sublimer objects, that the mind seems to expand, as if already shaking off its earthly fetters, and returning to its source; and it is scarcely too much to say, that the delight which it thus takes in things divine is an internal evidence of its own divinity. "Cum illa tetigit, alitur, crescit: ac velut vinculis liberatus, in originem redit. Et hoc habet argumentum divinitatis suæ, quod illum divina delectant."

I have thus briefly sketched the various important inquiries, which the philosophy of mind, in its most extensive sense, may be said to comprehend. The nature of our spiritual being, as displayed in all the phenomena of feeling and thought—the ties which

* Seneca Nat. Quæst. Lib. 1. Præf.

bind us to our fellow-men, and to our Creator—and the prospect of that unfading existence, of which life is but the first dawning gleam;—such are the great objects to which, in the department of your studies committed to *my* charge, it will be my office to guide your attention and curiosity. The short period of the few months to which my course is necessarily limited, will not, indeed, allow me to prosecute, with such full investigation as I should wish, *every* subject that may present itself in so various a range of inquiry. But even these few months, I flatter myself, will be sufficient to *introduce* you to all which is most important for you to know in the science, and to give such lights as may enable you, in other hours, to explore, with success, the prospects that here, perhaps, may only have opened on your view. It is not, I trust, with the labours of a single season that such inquiries, on your part, are to terminate. Amid the varied occupations and varied pleasures of your future years,—in the privacy of domestic enjoyment, as much as in the busier scenes of active exertion,—the studies on which you are about to enter must often rise to you again with something more than mere remembrance; because there is nothing that can give you interest, in any period or situation of your life, to which they are not related. The science of mind, is the science of yourselves; of all who surround you; of every thing which you enjoy or suffer, or hope or fear: so truly the science of your very being, that it will be impossible for you to look back on the feelings of a single hour, without constantly retracing phenomena that have been here, to a cer-

tain extent, the subjects of your analysis and arrangement. The thoughts and faculties of your own intellectual frame, and all which you admire as wonderful in the genius of others,—the moral obligation, which, as obeyed or violated, is *ever* felt by you with delight or with remorse,—the virtues, of which you think as often as you think of those whom you love; and the vices, which you view with abhorrence, or with pity,—the traces of divine goodness, which never can be absent from your view, because there is no object in nature which does not exhibit them, —the feeling of your dependence on the gracious Power that formed you,—and the anticipation of a state of existence more lasting than that which is measured by the few beatings of a feeble pulse,— these, in their perpetual recurrence, *must* often recal to you the inquiries that, in this place, engaged your early attention. It will be almost as little possible for you to abandon wholly such speculations, as to look on the familiar faces of your home with a forgetfulness of every hour which they have made delightful, or to lose all remembrance of the very language of your infancy, that is every moment sounding in your ears.

Though I shall endeavour, therefore, to give as full a view as my limits will permit of all the objects of inquiry which are to come before us, it will be my chief wish to awake in you, or to cherish, a *love* of these sublime inquiries themselves. There is a philosophic spirit which is far more valuable than any limited acquirements of philosophy; and the cultivation of *which*, therefore, is the most precious ad-

vantage that can be derived from the lessons and studies of many academic years:—a spirit, which is quick to pursue whatever is within the reach of human intellect; but which is not less quick to discern the bounds that limit every human inquiry, and which, therefore, in seeking much, seeks only what man may learn:—which knows how to distinguish what is just in itself from what is merely accredited by illustrious names; adopting a truth which no one has sanctioned, and rejecting an error of which all approve, with the same calmness as if no judgment were opposed to its own:—but which, at the same time, alive, with congenial feeling, to every intellectual excellence, and candid to the weakness from which no excellence is wholly privileged, can dissent and confute without triumph, as it admires without envy; applauding *gladly* whatever is worthy of applause in a rival system, and venerating the very genius which it demonstrates to have erred.

Such is that philosophic temper to which, in the various discussions that are to occupy us, it will be my principal ambition to form your minds; with a view not so much to what you are at present, as to what you are afterwards to become. You are now, indeed, only *entering* on a science, of which, by many of you, perhaps, the very *elements* have never once been regarded as subjects of *speculative inquiry*. You have much, therefore, to learn, even in learning only what others have thought. But I should be unwilling to regard you as the passive receivers of a system of opinions, content merely to re-

member whatever mixture of truths and errors may have obtained your easy assent. I cannot but look to you in your maturer character, as yourselves the philosophers of other years; as those who are, perhaps, to add to science many of its richest truths, which as yet are latent to every mind, and to free it from many errors, in which no one has yet suspected even the possibility of illusion. The spirit which is itself to become *productive* in you, is, therefore, the spirit which I wish to cultivate; and happy, as I shall always be, if I succeed in conveying to you that instruction which it is my duty to communicate, I shall have still more happiness if I can flatter myself, that, in this very instruction, I have trained you to habits of thought, which may enable you to enrich, with your own splendid discoveries, the age in which you live, and to be *yourselves* the *instructors* of all the generations that are to follow you.

LECTURE II.

RELATION OF THE PHILOSOPHY OF MIND TO THE SCIENCES IN GENERAL.

In my former Lecture, Gentlemen, I gave you a slight sketch of the departments into which the Philosophy of Mind divides itself, comprehending, in the *first* place, The physiology of the mind, considered as a substance capable of the various modifications, or states, which constitute, as they succeed each other, the phenomena of thought and feeling; *secondly*, The doctrines of general ethics, as to the obligation, under which man lies, to increase and extend, as widely as possible, the happiness of all that live; *thirdly*, The political doctrines, as to the means which enable him, in society with his fellow men, to further, most successfully, and with the least risk of future evil, that happiness of all, which it is the duty of each individually to wish and to promote; and, *fourthly*, The doctrines of natural theology, as to the existence and attributes of that greatest of Beings, under whose moral government we live, and the foundations of our confidence that death is only a change of scene, which, with respect to our mortality indeed,

may be said to be its close; but which, with respect to the soul itself, is only *one of the events* of a life that is everlasting.

Of these great divisions of our subject, the *Physiology of the Mind*, or the consideration of the regular *series of phenomena* which it presents, simply as *states* or *affections* of the mind, is that to which we are first to turn our attention. But, before entering on it, it may be useful to employ a few Lectures in illustrating the *advantages*, which the study of the mind affords, and the *principles of philosophizing*, in their peculiar application to it—subjects, which, though of a general kind, will, I trust, leave an influence, that will be felt in all the particular enquiries in which we are to be engaged; preparing you, both for appreciating better the importance of those enquiries, and for prosecuting them with greater success.

One very obvious distinction of the physical investigations of mind and matter, is, that, in intellectual science, the *materials* on which we operate, the *instruments* with which we operate, and the *operating agent*, are the same. It is the *mind*, endowed with the faculties of perception and judgment, *observing*, *comparing*, and *classifying* the phenomena of *the mind*. In the physics of matter, it is, indeed, the mind which observes, compares, and arranges; but the phenomena are those of a world, which, though connected with the mind by many wonderful relations of reciprocal agency, still exists *independently* of it—a world that presents its phenomena only in circumstances, over most of which we

have no controul, and over others a controul that is partial and limited. The comparative facility, as to *all external circumstances,* attending the study of the mental phenomena, is unquestionably an advantage of no small moment. In every situation in which man can be placed, as long as his intellectual faculties are unimpaired, it is impossible that he should be deprived of opportunities of carrying on this intellectual study; because, in every situation in which he can be placed, he must still have with him that universe of thought, which is the true home and empire of the mind. No costly apparatus is requisite—no tedious waiting for seasons of observation. He has but to look within himself to find the *elements* which he has to *put together,* or the *compounds* which he has to *analyze,* and the *instruments* that are to perform the *analysis* or *composition.*

It was not, however, to point out to you the advantage which arises to the study of our mental frame, from the comparative facility as to the circumstances attending it, that I have led your attention to the difference, in this respect, of the physics of mind and matter. It was to show,—what is of much more importance,—how essential a right view of the *science of mind* is to every other science, even to those sciences, which superficial thinkers might conceive to have no connexion with it; and how vain it would be to expect, that any branch of the physics of mere matter could be cultivated to its highest degree of accuracy and perfection, without a due acquaintance with the nature of that *intellectual medium,* through which alone the phenomena of mat-

ter become visible to us, and of those *intellectual instruments*, by which the objects of *every* science, and of every science alike, are measured, and divided, and arranged. We might almost as well expect to form an accurate judgment, as to the figure, and distance, and colour of an object, at which we look through an optical glass, without paying any regard to the colour and refractory power of the line itself. The distinction of the *sciences* and *arts*, in the sense in which these words are commonly understood, is as just as it is familiar; but it may be truly said, that, in relation to our power of discovery, science is itself an art, or the result of an art. Whether, in this most beautiful of *processes*, we regard the mind as the *instrument* or the *artist*, it is equally that by which all the wonders of speculative, or practical knowledge, are evolved. It is an agent operating in the production of new results, and employing for this purpose the known laws of thought, in the same manner as, on other occasions, it employs the known laws of *matter*. The objects, to which it may apply itself, are indeed various, and, as such, give to the sciences their different names. But, though the objects vary, the observer *and the instrument* are continually the same. The limits of the powers of this mental *instrument*, are not the limits of *its* powers alone; they are also the only real limits, within which every science is comprehended. *To the extent which it* allows, all those sciences, physical or mathematical, and all the arts which depend on them, may be improved; but, *beyond this point*, it would be vain to expect them to pass; or rather, to speak more accurately, the

very *supposition* of any progress beyond this point would imply the grossest absurdity; since human science can be nothing more than the result of the direction of human faculties to particular objects. To the astronomer, the *faculty* by which he *calculates* the disturbing forces that operate on a satellite of Jupiter, in its revolution round its primary planet, is as much *an instrument of his art*, as the telescope by which he distinguishes that almost invisible orb; and it is as important, and surely as interesting, to know the real power of the intellectual instrument, which he uses, not for calculations of this kind only, but for all the speculative and moral purposes of life, as it can be to know the exact power of that *subordinate* instrument, which he uses only for his occasional survey of the heavens.

To the philosophy of *mind*, then, *every* speculation, in *every* science, may be said to have relation as to a common centre. The knowledge of the quality of matter, in the whole wide range of physics, is not itself a phenomenon of *matter*, more than the knowledge of any of our intellectual or moral affections; it is truly, in all its stages of conjecture, comparison, doubt, belief, a phenomenon of *mind*; or, in other words, it is only the *mind* itself existing in a certain state. The inanimate bodies around us might, indeed, exhibit the same changes as at present, though no mind had been created. But *science* is not the existence of these inanimate bodies; it is the principle of thought itself variously modified by them, which, as it exists in certain states, constitutes that knowledge which we term *Astronomy*; in cer-

tain other states, that knowledge which we term *Chemistry*; in other states our Physiology, corporeal or mental, and all the other divisions and subdivisions of science. It would surely be absurd to suppose, that the mixture of acids and alkalies constitutes *Chemistry*, or that Astronomy is formed by the revolution of planets round a sun. Such phenomena, the mere objects of science, are only the occasions on which Astronomy and Chemistry arise in the mind of the inquirer, Man. It is the mind which perceives bodies, which reasons on their apparent relations, which joins them in thought as similar, however distant they may be in sphere, or separates them in thought as dissimilar, though apparently contiguous. These perceptions, reasonings, and classifications of the mind must, of course, be regulated by the laws of mind, which mingle in their joint result with the laws of matter. It is the object indeed which *affects* the mind when sentient; but it is the original susceptibility of the mind itself, which determines and modifies the particular *affection*, very nearly, if I may illustrate what is *mental* by so coarse an image, as the impression which a seal leaves on melted wax depends, not on the qualities of the *wax alone*, or of the *seal alone*, but on the softness of the one, and the form of the other. Change the external object which affects the mind in any case, and we all know, that the affection of the mind will be different. It would not be less so, if, *without* any change of *object*, there could be a change in the mere feeling, whatever it might be, which would result from that different susceptibility becoming instantly

as different, as if not the mind had been altered, but the object which it perceived. There is no physical science, therefore, in which the laws of mind are not to be considered together with the laws of matter; and a change in either set of laws would *equally* produce a change in the nature of the science itself.

If, to take one of the simplest of examples, the mind had been formed susceptible of all the modifications which it admits at present, *with the single exception of those which it receives on the presence of light*, of how many objects and powers in nature, which we are now capable of distinguishing, must we have remained in absolute ignorance! But would this *comparative ignorance* of many objects be the *only* effect of such a change of the laws of mind, as I have supposed? Or rather, is it not equally certain, that this *simple change alone* would be sufficient to *alter* the very *nature* of the limited science of which the mind would still be capable, as much as it narrowed its *extent*? Science is the classification of relations; varying, too, in every case, as the relations observed are different; and how very differently should we, in such circumstances, have classed the few powers of the few objects, which might still have become known to us, since we could no longer have classed them according to any of those visual relations, which are always the most obvious and prominent. It is even, perhaps, an extravagant supposition, that a race of the *blind*, unless endowed with some other sense to compensate the defect of sight, could have acquired so much command of the common arts of life, or so much science of any sort,

as to preserve themselves in existence. But though all this, by a very strong licence of supposition, were taken for granted, it must surely be admitted, that the knowledge which man could in those circumstances acquire, would be not merely *less in degree*, but would be as truly *different* from that which his powers at present have reached, as if the objects of his science, or the laws which regulate them, had themselves been changed to an extent, at least as great as the supposed change in the laws of mind. The *astronomy* of the *blind*, if the word might still be used to express a science so very different from the present, would, in truth, be a sort of *chemistry*. Day and night, the magnificent and harmonious revolution of season after season, would be nothing more than periodical changes of temperature in the objects around; and that great Dispenser of the seasons, the Source of light, and beauty, and almost of animation, at whose approach nature seems not merely to awake, but to rise again, as it was at first, from the darkness of its original chaos, if its separate existence could be at all inferred, would probably be classed as something similar, though inferior in power, to that unknown source of heat, which, by a perilous and almost unknown process, was fearfully piled and kindled on the household hearth.

So accustomed are we, however, to consider the nature and limits of the different sciences, as depending on the objects themselves, and not on the laws of the mind, which classes their relations, that it may be difficult for you at first to admit the influence of these *mere laws of mind*, as modifying

general physics, at least to the extent which I have now stated. But, that a change in the laws of human thought, whatever influence it might have in altering *the very nature and limits* of the physical sciences, would at least affect greatly *the state of their progress*, must be immediately evident to those who consider for a moment on what *discovery* depends; the progress of science being obviously nothing more than a series of individual discoveries, and the number of discoveries varying with the powers of the individual intellect. The same phenomena which were present to the mind of Newton, had been present, innumerable times before, not to the understandings of philosophers only, but to the very senses of the vulgar. Every thing was the same to *him* and to them, *except* the observing and reasoning mind. To *him alone*, however, they suggested those striking analogies, by which, on a comparison of all the known circumstances in both, he ventured to class the force which retains the planets in their orbits, with that which occasions the fall of a pebble to the earth.

> " Have ye not listen'd, while he bound the suns
> And planets to their spheres! the unequal task
> Of human kind till then. Oft had they roll'd
> O'er erring man the year, and oft disgraced
> The pride of schools.
> ——He took his ardent flight
> Through the blue infinite; and every star
> Which the clear concave of a winter's night
> Pours on the eye, or astronomic tube,
> Far-stretching, snatches from the dark abyss,
> Or such as farther in successive skies
> To fancy shine alone, at his approach

Blazed into suns, the living centre each
Of an harmonious system; all combined,
And ruled unerring by that single power,
Which draws the stone projected to the ground."*

It is recorded of this almost superhuman Genius, whose powers and attainments at once make us proud of our common nature, and humble us with our disparity, that, in acquiring the Elements of Geometry, he was able, in a very large proportion of cases, to pass immediately from Theorem to Theorem, by reading the mere enunciation of each, perceiving, as it were intuitively, that latent evidence, which others are obliged slowly to trace through a long series of Propositions. When the same Theorem was enunciated, or the same simple phenomenon observed, the successions of thought, in *his* mind, were thus obviously different from the successions of thought in other minds; but it is easy to conceive the original susceptibilities of *all* minds such, as exactly to have corresponded with those of the mind of Newton. And if the minds of *all men*, from the creation of the world, had been similar to the mind of Newton, is it possible to conceive, that the state of *any science* would have been, at this moment, what it now is, or in any respect *similar* to what it now is, though the laws which regulate the physical changes in the material universe had continued unaltered, and no change occurred, but in the simple original susceptibilities of the mind itself?

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* Thomson's Poem on the Death of Sir Isaac Newton.

The laws of the observing and comparing mind, then, it must be admitted, *have* modified, and must always continue to modify, every science, as truly as the laws of that particular department of nature of which the phenomena are observed and compared. But, it may be said, we are Chemists, we are Astronomers, without studying the philosophy of mind. And true it certainly is, that there are excellent Astronomers, and excellent Chemists, who have never paid any particular attention to intellectual philosophy. The general principles of philosophizing, which a more accurate intellectual philosophy had introduced, have become familiar to them, without study. But those general principles are not less the effect of that improved philosophy of mind, any more than astronomy and chemistry themselves have now a less title to be considered as sciences,—because, from the general diffusion of knowledge in society, those who have never professedly studied either science, are acquainted with many of their most striking truths. It is gradually, and almost insensibly, that truths diffuse themselves—at first admired and adopted by a few, who are able to compare the present with the past, and who gladly *own* them, as additions to former knowledge,—from them communicated to a wider circle, who receive them, without discussion, as if familiar and long known; and at length, in this widening progress, becoming so nearly universal, as almost to seem effects of a natural instinctive law of human thought:—like the light, which we readily ascribe to the sun, as it first flows directly from him, and forces his image on our sight; but which, when

reflected from object to object, soon ceases to remind us of its origin, and seems almost to be a part of the very atmosphere which we breathe.

I am aware, that it is not to improvements in the mere philosophy of mind, that the great reformation in our principles of physical inquiry is commonly ascribed. Yet it is to *this source*—certainly at least to this source chiefly, that I would refer the origin of those better plans of philosophical investigation which have distinguished with so many glorious discoveries the age in which we live, and the ages immediately preceding. When we think of the great genius of Lord Bacon, and of the influence of his admirable works, we are too apt to forget the *sort* of difficulties which his genius must have had to overcome, and to look back to his rules of philosophizing, as a sort of ultimate truths, discoverable by the mere perspicacity of his superior mind, without referring them to those simple views of nature in relation to our faculties of discovery, from which they were derived. The rules which he gives us, are rules of *physical investigation*; and it is very natural for us, therefore, in estimating their value, to think of the erroneous physical opinions which preceded them, without paying sufficient attention to the false theories of intellect, which had led to those very physical absurdities. Lord Bacon, if he was not the first who discovered that we were, in some degree *idolaters*, to use his own metaphor, in our intellectual worship, was certainly the first who discovered the *extent* of our idolatry. But we must not forget, that the temple which he purified, was

not the temple of *external nature*, but the temple of the *mind*,—that in *its* inmost sanctuaries were all the idols which he overthrew,—and that it was not till these were removed, and the intellect prepared for the presence of a nobler divinity, that Truth would deign to unveil herself to adoration;—as in the mysteries of those Eastern religions, in which the first ceremony for admission to the worship of the God is the purification of the worshipper.

In the course of our analysis of the intellectual phenomena, we shall have frequent opportunities of remarking the influence, which errors with respect to these *mere phenomena of mind* must have had, on the contemporary systems of general physics, and on the spirit of the prevailing plans of inquiry. It may be enough to remark at present the influence of *one* fundamental error, which, as long as it retained its hold of the understanding, must have rendered all its energies ineffectual, by wasting them in the search of objects, which it never could attain, because in truth they had no real existence,—to the neglect of objects that would have produced the very advantage which was sought. I allude to the belief of the schools, in the separate existence, or *entity* as they technically termed it, of the various orders of *universals*, and the mode in which they conceived every *acquisition* of *knowledge* in reasoning, to take place, by the intervention of certain intelligible forms or species, existing separately *in* the intellect, as the *direct objects* of thought,—in the same manner as they ascribed simple perception to the action of species of another order, which they

termed sensible species,—the images of things derived indeed from objects without, but when thus derived, existing independently of them. When we amuse ourselves with inquiring into the history of human folly—that most comprehensive of all histories—which includes, at least for many ages, the whole history of philosophy; or rather, to use a word more appropriate than *amusement*,—when we read with regret the melancholy annals of genius aspiring to be pre-eminently frivolous, and industry *labouring* to be ignorant, we often discover absurdities of the grossest kind, which almost cease to be absurdities, on account of other absurdities, probably as gross, which accompany them; and this is truly the case, in the grave extravagance of the logic of the schools. The scholastic *mode of philosophizing*, ridiculous as it now seems, was far from absurd, when taken in connection with the *scholastic philosophy*. It was indeed the only mode of procedure, which that philosophy could consistently admit. To those who believed that *singular* objects could afford no real knowledge, *singularium nullam dari scientiam*; and that this was to be obtained only from what they *termed intelligible species*, existing not in external things, but in the intellect inself, it must have seemed as absurd to wander, in quest of *knowledge*, out of that region in which alone they supposed it to exist, and to seek it among things singular, as it would now, to us, seem hopeless and absurd, to found a system of physical truths on the contemplation and comparison of universals. While this false theory of the mental phe-

nomena prevailed, was it possible, that the phenomena of matter should have been studied on sounder principles of investigation, when any better plan must have been absolutely inconsistent with the very theory of thought? It was in mind that the student of general nature was to seek his guiding light, without which all then was darkness. The intellectual philosopher, if any such had then arisen, to analyse simply the phenomena of thought, without any reference to general physics, would in truth have done more in that dark age, for the benefit of every physical science, than if he had discovered a thousand properties of as many different substances.

Let us suppose, for a moment, that an accurate view of the intellectual process of abstraction could have been communicated to a veteran sage of the schools, at the very moment when he was intently contemplating the tree of Porphyry, in all its branches of species and genera, between the individual and the *summum genus;* and when he was preparing perhaps, by this contemplation of a few universals, to unfold all the philosophy of colours, or of the planetary movements, would the benefit which he received from this clearer view of a single process of thought have terminated in the mere science of mind—or would not rather his new views of mind have extended with a most important influence to his whole wide views of matter?—He must immediately have learned, that, in the whole tree of genera and species, the individual at the bottom of his scale was the only real independent

existence, and that all the rest, the result of certain comparisons of agreement or disagreement, were simple modifications of his own mind, not produced by any thing *existing in his intellect* but by the *very constitution* of his *intellect itself;* the consideration of a number of individuals as of *one species* being nothing more than the feeling of their agreement in certain respects, and the feeling of this agreement being as simple a result of the observation of them *together*, as the perception of each, *individually*, was of its individual presence. It would surely have been impossible for him, with this new and important light, to return to his transcendental inquiries, into entities, and quiddities, and substantial forms; and the simple discovery of a better theory of *abstraction*, as a *process of the mind*, would thus have supplied the place of many rules of philosophizing.

The philosophy of mind then, we must admit, *did*, in former ages at least, exercise an important influence on general science:—and are we to suppose that it has now *no* influence?

Even though no other advantage *were* to be obtained from our present juster views of *mind*, than the protection which they give, from those gross errors of inquiry to which the philosophers of so long a series of ages were exposed, *this alone* would surely be no slight gain. But, great as this advantage is, are we certain, that it is all which the nicest mental analysis can afford,—or rather, is it not *possible* at least, that we may *still*, in our plans of physical investigation, be suffering under the influence of er-

rors from which we should be saved, by still juster views of the faculties employed in every physical inquiry.

That we are not aware of any such influence, argues nothing; for to suppose us aware of it, would be to suppose us acquainted with the very errors which mislead us. Aquinas and Scotus, it is to be presumed, and all their contentious followers, conceived themselves as truly in the *right path* of physical investigation, as we do at this moment; and, though we are free from *their* gross mistakes, there may yet be others of which we are *less* likely to divest ourselves, from not having as yet the slightest suspicion of their existence. The question is not, Whether *our* method of inquiry be *juster* than *theirs*?—for, of our superiority in this respect, if any evidence of fact were necessary, the noble discoveries of these later years are too magnificent a proof to allow us to have any doubt,—but, Whether our plan of inquiry may not *still* be susceptible of *improvements*, of which *we* have now as little foresight, as the Scotists and Aquinists of the advantages which philosophy has received from the general prosecution of the inductive method? There is, indeed, no reason now to fear, that the observation of particular objects, with a view to general science, will be despised as incapable of giving any direct knowledge, and all real science be confined to universals. "Singularium *datur* scientia." But, though a sounder view of *one* intellectual process may have banished from philosophy much idle contention, and directed

inquiry to fitter objects, it surely does not therefore follow, that subsequent improvements in the philosophy of mind are to be absolutely unavailing. On the contrary, the presumption unquestionably is, that if, by understanding better the simple process of abstraction, we have freed ourselves from many errors in our plans of inquiry, a still clearer view of the nature and limits of *all* the intellectual processes concerned in the discovery of truth, may lead to *still juster* views of philosophizing.

Even at present, I cannot but think that we may trace, in no inconsiderable degree, the influence of false notions, as to some of the phenomena of the mind, in misdirecting the spirit of our general philosophy. I allude, in particular, to *one* very important intellectual process,—that by which we acquire our knowledge of the relation on which all physics may be said to be founded. He must have paid little attention to the history of philosophy, and even to the philosophy of his own time, who does not perceive, how much the vague and obscure notions *entertained* of that intermediate tie, which is supposed to connect phenomena with each other, have tended to favour the invention and ready admission of physical hypotheses, which otherwise could not have been entertained for a moment;—hypotheses, which attempt to explain what is known by the introduction of what is unknown; as if successions of phenomena were rendered easier to be understood merely by being rendered more complicated. This very unphilosophic passion for complexity, (which, unphilosophic as it is, is yet the passion of many

philosophers,) seems, to me, to arise, in a great measure, from a mysterious and false view of causation; as involving always, in every series of changes, the intervention of something unobserved, between the observed antecedent and the observed effect;—a view which may very naturally be supposed to lead the mind, when it has observed no *actual* intervention, to *imagine* any thing which is not absolutely absurd, that it may flatter itself with the pleasure of having discovered a *cause*. It is unnecessary, however, to enlarge at present on this subject, as it must again come before us; when you will perhaps see more clearly, how much the general diffusion of juster views, as to the nature and origin of our notion of the connection of events, would tend to the simplification, not of our theories of *mind* only, but, in a still higher degree, of our theories of *matter*.

The observations already made, I trust, have shewn how important, to the perfection of *every* science, is an accurate acquaintance with that *intellectual medium*, through which alone the objects of every science become known to us, and with those *intellectual instruments*, by which, *alike in every science*, truth is to be detected and evolved. On this influence, which the philosophy of mind must always exercise on general philosophy, I have dwelt the longer, because, important as the relation is, it is one which we are peculiarly apt to forget; and the more apt to forget it, on account of that very excellence of the physical sciences, to which it has itself essentially contributed. The discoveries, which reward our inquiry into the properties of matter, as

now carried on, on principles better suited to the nature and limits of our powers of investigation, are too splendid to allow us to look back to the circumstances which prepared them at a distance; and we avail ourselves of rules, that are the result of logical analysis, without reflecting, and almost without knowing, that they are the result of any analysis whatever. We are, in this respect, like navigators on the great ocean, who perform their voyage successfully by the results of observations, of which *they* are altogether ignorant; who look, with perfect confidence, to their compass and chart, and think of the *stars* as useful only in those early ages, when the pilot, if he ventured from shore, had no other directors of his course. It is only some more skilful mariner who is still aware of their guidance; and who knows, how much he is indebted to the satellites of Jupiter for the accuracy of that very chart, by which the crowds around him are mechanically directing their course.

The chief reason, however, for my dwelling so long on this central and governing relation, which the philosophy of intellect bears to all other philosophy, is, that I am anxious to impress their relation strongly on your minds; not so much with a view to the importance which it may seem to give to the particular science that is to engage us together, as with a view to those *other* sciences in which you may already have been engaged, or which may yet await you in the course of your studies. The consideration of *mind*, as universally present and presiding,—at once the medium of all the knowledge

which can be acquired, and the subject of all the truths of which that knowledge consists,—gives, by its own unity, a sort of unity and additional dignity to the sciences, of which their scattered experiments and observations would otherwise be unsusceptible. It is an unfortunate effect of physical inquiry, when exclusively devoted to the properties of external things, to render the *mind*, in our imagination, *subordinate* to the objects on which it is directed; the faculties are nothing, the objects every thing. The very nature of such inquiry leads us perpetually *without* to observe and arrange, and nothing brings us back to the *observer* and *arranger within*; or, if we do occasionally cast an inquisitive glance on the phenomena of our thought, we bring back with us what Bacon, in his strong language, calls "the smoke and tarnish of the furnace;"—the mind seems, to us, to be broken down to the littleness of the objects which it has been habitually contemplating; and we regard the faculties that measure earth and heaven, and that add infinity to infinity, with a curiosity of no greater interest, than that with which we enquire into the angles of a crystal, or the fructification of a moss. "Ludit istis animus," says one of the most eloquent of the ancients,—"Ludit istis animus, non proficit; et philosophiam a fastigio deducit in planum." To rest in researches of this minute kind, indeed, if we were absolutely to REST in them, without any higher and profounder views, would truly be, as he says, to drag down philosophy from that pure eminence on which she sits, to the very dust of the plain on which we tread. To the inquirer, how-

ever, whose mind has been previously embued with this *first philosophy*, and who has learned to trace, in the wonders of every science, the wonders of his own intellectual frame, there is no physical research, however minute its object, which does not at once elevate the mind, and derive elevation from it. Nothing is truly humble, which can exercise faculties that are themselves sublime.

> ——Search, undismayed, the dark profound,
> Where Nature works in secret; view the beds
> Of mineral treasure, and the eternal vault
> That bounds the hoary ocean; trace the forms
> Of atoms, moving with incessant change,
> Their elemental round; behold the seeds
> Of being, and the energy of life,
> Kindling the mass with ever active flame:
> Then to the secrets of the working mind
> Attentive turn; from dim oblivion call
> Her fleet ideal band; and bid them go
> Break through time's barrier, and o'ertake the hour
> That saw the heavens created: then declare,
> If aught were found in these external scenes
> To move thy wonder now.*

In the physics of the material universe, there *is*, it must be owned, *much* that is truly worthy of our philosophic admiration, and of the sublimest exertions of philosophic genius. But even that material world will appear more admirable, to him who contemplates it, as it were, from the height of his own mind, and who measures its infinity with the range of his own limited but aspiring faculties. *He* is

* Akenside's Pleasures of Imagination, Book I. v. 512—526.

unquestionably the philosopher most worthy of the name, who unites to the most accurate knowledge of mind, the most accurate knowledge of all the physical objects amid which he is placed; who makes each science, to each, reciprocally a source of additional illumination; and who learns, from both, the noblest of all the lessons which they can give,—the knowledge and adoration of that divine Being, who has alike created, and adapted to each other, with an order so harmonious, the universe of matter, and the universe of thought.

LECTURE III.

RELATION OF THE PHILOSOPHY OF MIND TO THE SCIENCES AND ARTS MORE STRICTLY INTELLECTUAL.

In my last Lecture, Gentlemen, I illustrated, at great length, the relation which the Philosophy of Mind bears to all the other sciences, as the common centre of each. These sciences I represented, as, in their relation to the powers of discovery, that are exercised *in* them, truly *arts*, in all the various intellectual *processes* of which, the *artist* is the same, and the *instruments* the *same*; and as to the perfection of any of the *mechanical* arts, it is essential, that we know the powers of the instruments employed in it, so, in the inventive processes of science of every kind, it seems essential to the perfection of the process, that we should know, as exactly as possible, the *powers* and the *limits* of these *intellectual instruments*, which are exercised alike in all;—that we may not waste our industry, in attempting to accomplish with them what is impossible to be accomplished, and at the same time may not despair of atchieving with them any of the wonders to which

they are truly adequate, if skilfully and perseveringly exerted; though we should have to overcome many of those difficulties which present themselves, as obstacles to every great effort, but which are insurmountable, *only to those who despair of surmounting them.*

It was to a consideration of this kind, as to the *primary* importance of knowing the questions to which our faculties are competent, that we are indebted for one of the most valuable works in our science,—a work, which none can read even now, without being impressed with reverence for the great talents of its author; but of which it is impossible to feel the whole value, without an acquaintance with the verbal trifling, and barren controversies, that still perplexed and obscured intellectual science at the period when it was written.

The work to which I allude is the *Essay on the Human Understanding*, to the composition of which Mr Locke, in his preface, states himself to have been led by an accidental conversation with some friends who had met at his chamber. In the course of a discussion, which had no immediate relation to the subject of the Essay, they found themselves unexpectedly embarrassed by difficulties that appeared to rise on every side, when, after many vain attempts to extricate themselves from the doubts which perplexed them, it occurred to Mr Locke, that they had taken a *wrong* course,—that the inquiry in which they were engaged was probably one which was beyond the reach of *human faculties*, and that their *first* inquiry should have been, into the nature

of the understanding itself, to ascertain what subjects it was *fit* to explore and comprehend.

"When we know our own strength," he remarks, "we shall the better know what to undertake with hopes of success: and when we have well surveyed the powers of our own minds, and made some estimate what we may expect from them, we shall not be inclined either to *sit still*, and not set our thoughts on work at all, in despair of knowing any thing; or, on the other side, question every thing, and disclaim *all* knowledge, because *some things* are not to be understood. It is of great use to the sailor, to know the length of his line, though he cannot with it fathom all the depths of the ocean. It is well he knows, that it is long enough to reach the bottom, at such places as are necessary to direct his voyage, and caution him against running upon shoals that may ruin him.—This was that which gave the first rise to this essay concerning the understanding. For I thought, that the first step towards satisfying several inquiries, the mind of man was very apt to run into, was to take a survey of our own understandings, examine our own powers, and see to what things they were adapted. Till that was done, I suspected we began at the wrong end, and in vain sought for satisfaction in a quiet and sure possession of truths that most concerned us, whilst we let *loose* our thoughts into the vast ocean of being, as if all that boundless extent were the natural and undoubted possession of our understandings.—Thus men, extending their inquiries beyond their capacities, and letting their

thoughts *wander* into those depths, where they can find no sure footing, it is no wonder that they raise questions and multiply disputes, which, never coming to any clear resolution, are proper only to continue and encrease their doubts, and to confirm them, at last, in perfect scepticism; whereas, were the capacities of our understanding well considered, the extent of our knowledge once discovered, and the *horizon* found, which sets the bounds between the enlightened and dark parts of things, between what *is* and what *is not* comprehensible by us, men would perhaps, with less scruple, acquiesce in the avowed ignorance of the one, and employ their thoughts and discourse, with more advantage and satisfaction in the other."*

These observations of Mr Locke illustrate, very happily, the importance of a right view of the *limits* of our understanding, for directing our enquiries to the objects *that are truly within our reach.* It is not the waste of intellect, as it lies torpid in the great multitude of our race, that is alone to be regretted in relation to science, which, in better circumstances, it might improve and adorn. It is, in many cases, the very *industry* of intellect, *busily exerted,* but exerted in labours that must be profitless, because the *objects,* to which the labour is directed, are *beyond the reach of man.* If half the *zeal,* and, I may add, even half the *genius,* which, during so many ages, were employed in attempting things impossible, had been given to investigations, on which the transcendental inquirers of those times would certainly have looked down with contempt,

* Essay on the Human Understanding.—Introd. sect. 6, 7.

there are many names that are now mentioned only with *ridicule* or *pity*, for which we should certainly have felt the same deep veneration, which our hearts so readily offer to the names of Bacon and Newton; or perhaps even the great names of Bacon and Newton might, in comparison with them, have been only of secondary dignity. It was not by idleness that this high rank of instructors and benefactors of the world was lost, but by a blind activity more hurtful than idleness itself. To those who never could have thought of numbering the population of our own little globe, it seemed an easy matter to number, with precise arithmetical accuracy, the tribes of angels, and to assign to each order of spiritual beings its separate duties, and separate dignities, with the exactness of some heraldic pomp; and, amid all those visible demonstrations of the Divinity which surround us wherever we turn our view, there were minds that could think, in relation to him, of every thing but his wisdom and goodness; as if He, who created us, and placed around us this magnificent system of things, were an object scarcely worthy of our reverence, till we had fixed his precise station in our logical categories, and had determined, not the majestic relations which he bears to the universe, as created and sustained by his bounty, but all the frivolous relations which he can be imagined to bear to *impossibilities* and *nonentities*.

> O, son of earth! attempt ye still to rise,
> By mountains pil'd on mountains, to the skies!
> Heaven still, with laughter, the vain toil surveys,
> And buries madmen in the heaps they raise.*

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* Pope's Essay on Man, Ep. iv. v. 73—76.

It is, indeed, then, to borrow Mr Locke's metaphor, of no slight importance to know the *length of our line*, though we cannot, with it, fathom all the depths of the ocean. With the knowledge, that, to a certain depth at least, we may safely confide in it, we shall not be corrupted, by our fear, to coast along the shore, with such cautious timidity as to lose all the treasures which might be obtained by a more adventurous voyage; nor tempted in the rashness of ignorance or despair, to trust ourselves wildly to every wind, though our course should be amidst rocks and quicksands.

The study of the natural limits of the faculties of the mind, has, indeed, sometimes been misrepresented, as favouring a tendency to vague and unlimited doubt *on all subjects*, even on those most important to individual and social happiness; as if the great names, to which we have long given our admiration, for the light which they have thrown on the powers and weaknesses of the human understanding, were not also the very names which we have been accustomed, not to admire merely, but to venerate, for excellence of a still nobler kind. Far from *leading* to general scepticism, it is, on the contrary, a sound study of the principles of our intellectual and moral nature, which alone can free from the danger of it. If the sceptical philosophy be *false*, as the assertors of this objection will allow that it most assuredly is, it can be overcome and destroyed only by a philosophy that is *true*; and the more deeply, and the more early, the mind is embued with the principles of truth, the more confidently may we rely on its re-

jection of the errors that are opposed to them. It is impossible for one, who is not absolutely born to labour, to pass through life without forming, in his own mind, occasionally, some imperfect reflections on the faculties by which he perceives and reasons; or without catching, from those with whom he may associate, some of those vague notions, of a vague philosophy, which pass unexamined from mind to mind, and become current in the very colloquial language of the day. The alternatives, therefore, (if we can, indeed, think of any *other* alternative when truth is one,) are not those of *knowledge* and *absolute ignorance* of the mental phenomena, but of *knowledge more or less accurate*; because absolute ignorance, even though it were a state to be wished, is beyond our power to preserve, in one who enjoys, in any respects, the benefit of education and liberal society. We might, with much greater prospect of success, attempt, by merely keeping from his view all professed treatises on Astronomy, to prevent him from acquiring that slight and common acquaintance with the system of the heavenly bodies, which is necessary for knowing that the sun does not go round the earth, than we could hope to prevent him from forming, or receiving, *some* notions, accurate or inaccurate, as to the nature of mind; and we surely cannot suppose, that the juster those opinions are, as to the nature and force of the principles of belief, the feebler must the principles of belief appear. It is not so, that nature has abandoned us, with principles which we must fear to examine, and with truths and illusions which we must never dare to se-

parate. In teaching us what our powers are *incapable* of attaining, she has, at the same time, taught us what truths they *may* attain; and, within this boundary, we have the satisfaction of knowing, that she has placed *all the truths* that are important for our virtue and happiness. He, whose eyes are the clearest to distinguish the bounding circle, cannot, surely, be the dullest to *perceive* the truths that are within. To know *only to doubt,* is but the first step in philosophy; and to rest at this first step, is either imbecility or idleness. It is not there that *Wisdom* sees, and compares, and pronounces; it is *Ignorance,* that, with dazzled eyes, just opening from the darkness of the night, perceives that she has been dreaming, without being able to distinguish, in the sunshine, what objects really existing are around. *He* alone is the philosopher *truly awake,* who knows both how to doubt, and how to believe; believing what is evident on the very same principles, which lead him to doubt, with various degrees of uncertainty, where the evidence is less sure. To conceive, that inquiry must lead to scepticism, is itself a species of scepticism, as to the power and evidence of the principles to which we have given our assent, more degrading, because still more irrational, than that open and consistent scepticism which it dreads. It would, indeed, be an unworthy homage to truths, which we profess to venerate, to suppose, that adoration can be paid to them only while we are ignorant of their nature; and that to approach their altars would be to discover, that the majestic forms, which seem animated at a distance, are only

lifeless idols, as insensible as the incense which we have offered to them.

The study of the powers and limits of the understanding, and of the sources of evidence in external nature and ourselves, instead of either forming or favouring a tendency to scepticism, is then, it appears, the *surest*, or rather the *only* mode, of removing the danger of such a tendency. *That mind* may soon doubt even of the most important truths, which has never learned to distinguish the *doubtful* from the *true*. But to know well the irresistible evidence on which truth is founded, is to *believe* in it, and to believe in it *for ever*.

Nor is it from the danger of *scepticism* only, that a just view of the principles of his intellectual constitution tends to preserve the philosophic inquirer. It saves him, also, from that presumptuous and haughty dogmatism, which, though free from *doubt*, is not, therefore, necessarily free from *error*; and which is, indeed, much more likely to be fixed in error than in truth, where the inquiry, that precedes conviction, has been casual and incomplete. A just view of our nature as intelligent beings, at the same time that it teaches us enough of our *strength* to allow us to rest with confidence on the great principles, physical, moral, and religious, in which alone it is of importance for us to confide, teaches us also enough of our *weakness*, to render us indulgent to the weakness of others. We cease to be astonished that multitudes should differ from us; because we know well, that while nature has made a provision for the universal assent of mankind to those *funda-*

mental physical truths, which are essential to their very existence, and those *fundamental truths of another kind*, which are equally essential to their existence *as subjects of moral government*, she has left them, together with principles of improvement that ensure their intellectual progress, a susceptibility of error, without which there could be no progression; and, while we almost trace back the circumstances which have modified our own individual belief, we cannot but be aware, at the same time, how many sources there are of prejudice, and, consequently, of difference of opinion, in the various situations in which the multitudes, that differ from us, have been placed. To feel anger at human error, says an ancient philosopher, is the same thing as if we were to be angry with those who stumble in the dark,—with the deaf for not obeying our command,—with the sick,—with the aged,—with the weary. That very dulness of discernment, which excites at once our wonder and our wrath, is but a part of the general frailty of mortality; and the love of our errors is not less inherent in our constitution than error itself. It is this general constitution which is to be studied by us, that we may know with what mistakes and weaknesses we must have to deal, when we have to deal with our fellow-men; and the true art, therefore, of learning to forgive *individuals*, is to learn first how much we have to forgive *to the whole human race*. "Illud potius cogitabis, non esse irascendum erroribus. Quid enim, si quis irascatur in tenebris parum vestigia certa ponentibus? Quid si

quis surdis, imperia non exaudientibus? Quid si pueris, quod neglecto dispectu officiorum, ad lusus et ineptos æqualium jocos spectent? Quid si illis irasci velis, qui ægrotant, senescunt, fatigantur? Inter cætera mortalitatis incommoda, et hæc est, caligo mentium: nec tantum necessitas errandi, sed errorum amor. Ne singulis irascaris, universis ignoscendum: generi humano venia tribuenda est."*

How much of the fury of the persecuting spirit of darker ages would have been softened and turned into moderation, by juster views of the nature of man, and of all the circumstances on which belief depends! It appears to us so very easy to believe what we consider as true,—or, rather, it appears to us so impossible to disbelieve it,—that, if we judge from our own momentary feelings only, without any knowledge of the general nature of belief, and of all the principles in our mental constitution by which it is diversified, we very naturally look on the dissent of others as a sort of *wilful and obstinate contrariety*, and almost as an insulting denial of a *right of approbation*, which we consider ourselves, in these circumstances, as very justly entitled to claim. The transition from this supposed *culpability* to the associated ideas of *pains* and *penalties*, is a very natural one; and there is, therefore, a sufficient fund of persecution in *mere ignorance*, though the spirit of it were not, as it usually is, aggravated by degrading notions of the divine Being, and false impressions of religious duty. *Very different* are the sentiments

* Seneca, de Ira, lib. ii. cap. 9.

which the science of mind produces and cherishes. It makes us tolerant, not merely by shewing the *absurdity* of endeavouring to overcome, by punishment, a belief which does not depend on suffering; but which may remain, and even gather additional strength, in imprisonment, in exile, under the axe, and at the stake. The absurdity of every attempt of this kind it shews indeed; but it makes us feel, still more intimately, that *injustice* of it, which is worse than absurdity,—by shewing our common nature, in all the principles of truth and error, with those whom we would oppress; all having faculties that may lead to truth, and tendencies of various kinds which may mislead to error, and the mere accidental and temporary difference of power being, if not the greatest, at least the *most obvious* circumstance, which, in all ages, has distinguished the *persecutor* from the *persecuted.*

Let not this weak, unknowing hand,
Presume thy bolts to throw;
Or deal damnation round the land,
On all I judge thy foe!

If I am right,—thy grace impart,
Still in the right to stay:
If I am wrong,—O, teach my heart,
To find the better way.*

Such is the language of devout philosophy. No proud assertion of individual infallibility,—no triumph over the consequences in others, of a fallible nature, which

* Pope's Universal Prayer, v. 25—32.

ourselves partake in common,—but the expression of feelings more suited to earthly weakness,—of a modest joy of belief, which is not less delightful for the humility that tempers it; and of a modest sorrow for the seeming errors of others, to which the consciousness of our own nature gives a sympathy of warmer interest. The more important the subject of difference, the *greater*, not the *less*, will be the indulgence of him who has learned to trace the sources of human error,—of error, that has its origin not in our weakness and imperfection merely, but often in the most virtuous affections of the heart,—in that respect for age, and admiration of virtue, and gratitude for kindness received, which make the opinions of those whom we love and honour seem to us, in our early years, as little questionable, as the virtues which we love to contemplate, or the very kindness which we feel at every moment beaming on our heart, in the tender protection that surrounds us. That the subjects, on which we may differ from others, are *important to happiness*, of course implies, that it is no slight misfortune *to have erred;* and that the mere error, therefore, must be already too great an evil to require any addition from our individual contempt or indignation, far less from the vengeance of public authority,—that *may* be right, in the opinions which it conceives to be insulted by partial dissent; but which *must* be wrong, in the means which it takes to avenge them. To be sincerely thankful for truths received, is, by the very nature of the feeling, to be sensible how great a blessing those have lost who are deprived of the same en-

joyment; and to look down, then, with insolent disdain, on the unfortunate victim of error, is, indeed, to render contemptible, (as far as it is in our feeble power to render it contemptible,) not the error which we despise, but the truth which allows us to despise it.

The remarks which I have as yet made, on the effects of acquaintance with the Philosophy of Mind, relate to its influence on the general spirit of philosophical inquiry; the advantages which must be derived, in every science, from a knowledge of the extent of the power of the intellectual instruments which we use for the discovery of truth; the skill which we thence acquire in distinguishing the questions in which we may justly hope to discover truth, from those questions of idle and endless controversy, the decision of which is altogether beyond the reach of our faculties; and the consequent moderation in the temper, with which we look both to our own possible attainments, and to the errors of others.

But, beside these *general* advantages, which the Philosophy of Mind extends to *all* the inquiries of which human genius is capable, there are some advantages more peculiarly felt in certain departments of science or art. It is not merely *with* the mind that we operate; the subject of our operations is also often the *mind itself*. In education, in criticism, in poetry, in eloquence, the *mind* has to act upon *mind*, to produce in it either *emotions* that are *temporary*, or *affections* and *opinions* that are *permanent*. We have to instruct it,—to convince it,—to persuade it,—to delight it,—to soften it with pity,—to agitate

it with terror or indignation;—and all these effects, when other circumstances of genius are the same, we shall surely be able to produce *more readily*, if we know the natural laws of thought and emotion; the feelings which are followed by other feelings; and the thoughts, which, expanding into other thoughts, almost of themselves produce the very passion, or conviction, which we wish to excite.

"One considerable advantage," says Mr Hume, "which results from the accurate and abstract philosophy, is its subserviency to the easy and humane; which, without the former, can never attain a sufficient degree of exactness in its sentiments, precepts, or reasonings. All polite letters are nothing but pictures of human life in various attitudes and situations; and inspire us with different sentiments of praise or blame, admiration or ridicule, according to the qualities of the object which they set before us. An artist *must* be better qualified to succeed in this undertaking; who, besides a delicate taste and quick apprehension, possesses an accurate knowledge of the *internal fabric*, the operations of the understanding, the workings of the passions, and the various species of sentiment which discriminate vice and virtue. However painful this inward search or inquiry may appear, it becomes, in some measure, requisite to those who would describe with success the obvious and outward appearances of life and manners. The anatomist presents to the eye the most hideous and disagreeable objects; but his science is highly useful to the painter in delineating even a Venus or an Helen. While the latter employs all the richest

colours of his art, and gives his figures the most graceful and engaging airs, he must still carry his attention to the inward structure of the human body, the position of the muscles, the fabric of the bones, and the use and figure of every part or organ. Accuracy is, in every case, advantageous to beauty, and just reasoning to delicacy of sentiment;—in vain would we exalt the one by depreciating the other."*

There is a most striking passage to the same purport, in that beautiful dialogue on ancient oratory, which has been ascribed, without any very satisfactory evidence, to various authors, particularly to Quinctilian, the younger Pliny, and Tacitus, and which is not unworthy of the most eminent of the names to which it has been ascribed. After dwelling on the universal science and erudition of the great master of Roman eloquence, the chief speaker in the dialogue proceeds to show the peculiar advantage which oratory must derive *from moral and intellectual science*, to the neglect of which fundamental study, as superseded by the frivolous disputations of the rhetorical schools, he ascribes the decay of eloquence in the age of which he speaks.

"Ita enim est, optimi viri, ita, ex multa eruditione, ex pluribus artibus, et omnium rerum scientia, exundat et exuberat illa admirabilis eloquentia. Neque oratoris vis et facultas, sicut ceterarum rerum, angustis et brevibus terminis eluditur; sed is est orator, qui de omni quæstione pulchrè, et ornatè, et ad persuadendum aptè dicere, pro dignitate rerum

* Inquiry concerning the Human Understanding, sect. 1.

ad utilitatem temporum, cum voluptate audientium, possit. Hæc sibi illi veteres persuadebant. Ad hæc efficienda intelligebant opus esse, non ut Rhetorum scholis declamarent,—sed ut his artibus pectus implerent, in quibus de bonis ac malis, de honesto ac turpi, de justo et injusto disputatur;—de quibus copiosè, et variè, et ornatè, nemo dicere potest, nisi qui cognovit naturam humanam.—Ex his fontibus etiam illa profluunt, ut facilius iram judicis vel instiget, vel leniat, qui scit quid ira, promptius ad miserationem impellat qui scit quid sit misericordia, et quibus animi motibus concitetur. In his artibus exercitationibusque versatus orator, sive apud infestos, sive apud cupidos, sive apud invidentes, sive apud tristes, sive apud timentes dicendum habuerit, tenebit habenas animorum, et prout cujusque natura postulabit, adhibebit manum et temperabit orationem, parato omni instrumento, et ad usum reposito."*

What is the whole art of criticism, in its most important applications, but the knowledge of the most natural successions of thought and feeling in the mind? We judge of the perspicuity and order of a discourse, by knowing the progress in which the mind, by the developement of truth after truth, may be made at last to see the full meaning of the most complex proposition. We judge of the beauty of impassioned poetry or eloquence, by knowing whether the figures, the images, the very feelings described, be such as, from our observation of the laws that regulate the internal series of changes in the

* Tacitus, *edit. Lipsii*, p. 484, 5.

mind, we know to be consistent with that state of emotion, in which a mind must exist that has been placed in the situation supposed. If all other circumstances be equal, *he* will undoubtedly be the best critic, who knows best the phenomena of human thought and feeling; and, without this knowledge, criticism can be nothing but a measurement of words, or a repetition of the ever repeated and endless common places of rhetoric. The knowledge of *nature*,—of the necessity of which critics speak so much, and so justly, and which is as essential to the critic himself, as to the writer on whom he sits in judgment,—is only another name for the knowledge of the successive transitions of feeling of the mind, in all the innumerable diversities in which it is capable of being modified, by the variety of circumstances in which it may be placed. It is for this reason, that, with so great an abundance of the mere *art*, or rather of the mere technical phrases of criticism, we have so very little of the *science* of it; because the science of criticism implies an acquaintance with the philosophy of thought and passion, which few can be expected to possess; and though nothing can be easier than to deliver opinions, such as pass current in the drawing-room, and even in the literary circle, which the frivolous may admire as profound, and the ignorant as erudite, and which many voices may be proud to repeat; though even the dull and pedantic are as able as the wise to say, in fluent language, that one passage of a work of genius is beautiful, and another the reverse,—because one of them is in accordance with some technical rules, or because Homer and

Milton have passages similar to the one, and not to the other: it is far from being equally easy to show, how the one passage is beautiful, *from its truth of character*, and the other, though perhaps rich in harmony of rhythm and rhetorical ornament, is yet faulty, by its violation of the *more important harmony* of thought and emotion,—a harmony which nature observes as faithfully, in the progress of those vehement passions that appear most wild and irregular, as in the calmest successions of feeling of the most tranquil hours. It would, indeed, be too much to say, as in the well-known couplet of Pope,

> "Let such teach others who themselves excel,
> And censure freely, who have written well;"*

for the critic requires only *one* of the *two* great talents, which, in the poet, ought to exist *together*, but which may yet exist separately. In the poet, there must be, in the first place, an inventive fancy to bring together thoughts and images which have never been combined before; and, with this inventive fancy, a discriminating judgment, which is to measure, by the standard of nature, the products of invention; and to retain them, only if they appear such, as though perhaps never before combined, might yet, in conformity with the natural laws of thought, have occurred to a mind, in the circumstances represented, as truly, as the other thoughts or images, which the works of other poets have rendered more familiar. This latter talent,—the judgment which determines

* Essay on Criticism, v. 15, 16.

the intrinsic beauty and fidelity to general nature,—is all which is absolutely requisite to the *critic*, who is not, therefore, under the necessity of being himself "the great sublime" which he draws. Yet, though all the elements of excellence in the *artist* are not absolutely requisite for the judgment of the sage and discriminating admirer of the noble works which that excellence may have produced, *some* of these elements unquestionably are requisite,—elements, for which the critic may search in vain in all the rules of rhetoricians, and even in the perusal of all the masterpieces of ancient and modern times, unless, to an acquaintance with these, he add an accurate acquaintance with that *intellectual and moral nature of man*, the beautiful conformity to which was the essential charm of all the pathos, and all the eloquence, which he has admired.

There is *another art*, however, to which knowledge of the intellectual and moral nature of man is still more important—that noble art, which has the charge of training the ignorance and imbecillity of infancy into all the virtue, and power, and wisdom of maturer manhood—of forming, of a creature, the frailest and feeblest perhaps which heaven has made, the intelligent and fearless sovereign of the whole animated creation, the interpreter, and adorer, and almost the representative of the Divinity. The art, which performs a transformation so wondrous, cannot but be admirable itself; and it is from observation of the laws of mind, that all which is most admirable in it is derived. These laws we must *follow* indeed, since they exist not by our contrivance, but

by the contrivance of that nobler wisdom, from which the very existence of the mind has flowed; yet, if we know them well, we can *lead* them, in a great measure, even while we *follow* them. And, while the helpless subject of this great moral art is every moment requiring our aid,—with an understanding that may rise, from truth to truth, to the sublimest discoveries, or may remain sunk for ever in ignorance, and with susceptibilities of vice that may be repressed, and of virtue that may be cherished,—can we know *too well* the means of checking what is evil, and of fostering what is good? It is too late to lie by, in indolent indulgence of affection, till vice be already formed in the little being whom we love, and to labour *then* to remove it, and to substitute the virtue that is opposite to it. Vice, already formed, is almost beyond *our* power. It is only in the state of *latent propensity*, that we can with much reason expect to overcome it, by the moral motives which we are capable of presenting; and to distinguish this propensity before it has expanded itself, and even before it is known to the very mind in which it exists,—to tame those passions *which are never to rage*, and to prepare, *at a distance*, the virtues of *other years*,—implies a knowledge of the mental constitution, which can be acquired only by a diligent study of the nature, and progress, and successive transformations of feeling. It is easy to know, that praise or censure, reward or punishment, may increase or lessen the tendency to the repetition of any particular action; and this, together with the means of elementary instruction, is all which is com-

monly termed *education*. But the true *science of education* is something far more than this. It implies a skilful observation of the past, and that long foresight of the future, which experience and judgment united afford. It is the art of seeing, not the *immediate effect* only, but the *series of effects* which may follow any particular thought or feeling, in the infinite variety of possible combinations—the art often of drawing virtue from apparent evil, and of averting evil that may rise from apparent good. It is, in short, the philosophy of the human mind applied practically to the human mind,—enriching it, indeed, with all that is useful or ornamental in *knowledge*, but at the same time giving its chief regard to objects of yet greater moment—averting *evil*, which all the sciences together could not compensate, or producing *good*, compared with which all the sciences together *are as nothing*.

LECTURE IV.

RELATION OF THE PHILOSOPHY OF MIND TO THE CULTIVATION OF MORAL FEELING.

We have already, Gentlemen, considered the relation which the *Philosophy of Mind* bears to the *Sciences in general*, and its particular application to those sciences and arts, in which the mind is not merely the *instrument* with which we carry on our intellectual operations, but the very *subject* on which we operate, as in the great arts of reasoning, and persuading, of delighting with all the charms of poetry and eloquence, of judging of the degrees of excellence that have been attained in these delightful arts; and, still more, its application to the noblest, though, in proportion to its value, the least studied of all the arts, the art of *education*. It remains still, to point out some moral effects which the study of the Science of Mind produces *in the inquirer himself*, effects which may not be obvious at first sight, but which result from it, as truly as the intellectual advantages already pointed out.

One very powerful and salutary influence of moral science arises directly from the mere contemplation

of the objects with which it is conversant—the benevolent affections, the pleasure which attends these, the sacrifices that are made by generous virtue, and all the sublime admiration which they excite—the sordid and malevolent, and joyless passions of the selfish—the fear and shame that attend the guilty in society, and the horrors that, with a certainty of constant return more dreadful than their very presence, await them in their solitary hours. It is good to have these often before us, and to trace and contrast all the *immediate*, and all the *remote* effects of vice and virtue, even though we should form, at the time, no direct reference to our own past or future conduct. Without any such reference to ourselves, we must still be sensible of the pleasure and serene confidence which attend *the one*, and of the insecurity and remorse which for ever hang over *the other*; and the *remaining impressions* of love and disgust, will have an influence on our future conduct, of which we may probably be altogether unconscious at the time. It is, in truth, like the influence of the example of those with whom we habitually associate, which no one perceives at any particular moment, though all are every moment subject to it; and to meditate often on virtue and happiness, is thus almost to dwell in a sort of social communion with the virtuous and happy. The influence of moral conceptions has, in this respect, been compared to that of *light*, which it is impossible to approach, without deriving from it some faint colouring, even though we should not sit in the very sunshine,—or to that of *precious odours*, amid which we cannot long remain, with-

out bearing away with us some portion of the fragrance. "Ea enim philosophiæ vis est, ut non solum studentes, sed etiam conversantes juvet. Qui in solem venit, licet non in hoc venerit, colorabitur: qui in unguentaria taberna resederunt, et paulo diutius commorati sunt, odorem secum loci ferunt: et qui apud philosophiam fuerunt, traxerint aliquid necesse est, quod prodesset etiam negligentibus."*

The nature of the process, by which this moral benefit arises from the mere contemplation of moral objects, frequently repeated, is far from obscure, though it depends on a cause to which you may perhaps as yet have paid little attention, but which, in an after part of the course, I shall have an opportunity of illustrating at length,—the influence of the *associating principle in the mind*,—of that principle, by which ideas and other feelings, that have often co-existed, acquire, for ever after, an almost indissoluble union. It is not merely, therefore, by having traced, more accurately than others, the consequences of vice and virtue, as affecting the general character, that the lover of moral science strengthens his admiration of virtue, and his abhorrence of vice. But, by the frequent consideration of virtue, *together with the happiness which it affords*, and of vice, *together with its consequent misery*, the notions of these become so *permanently*, and so *deeply* associated, that future virtue appears almost like happiness about to be enjoyed, and future vice like approaching misery. The dread of misery, and the love of happiness, which

* Seneca, Ep. 108.

are essential principles of our very *physical* existence, are thus transformed into principles of *moral conduct,* that operate, *before reflection,* with the rapidity, and almost with the energy of instincts,—and that, *after reflection,* add to our virtuous resolutions a force and stability, which, as results of mere reasoning, they could not possess.

It is, besides, no small advantage of the abstract consideration of virtue, as opposed to the miseries of vice, that, in considering these philosophically, we regard them as stripped of every thing that can blind or seduce us; and we behold them, therefore, *truly as they are.* It is not in the madness of intemperate enjoyment, that we see drunkenness in the goblet, and disease in the feast. Under the actual seduction of a passion, we see *dimly,* if we see at all, any of the evils to which it leads; and if the feelings, of which we are then conscious, were those which were for ever after to be associated with the remembrance of the passion, it would appear to us an object, not of disgust or abhorrence, but of delight and choice, and almost of a sort of moral approbation. It is of importance, then, that we should consider the passion, *at other moments than these,* that the images associated with it may be not of that brief and illusive pleasure, which stupifies its unfortunate victim, but of its true inherent character, of deformity, and of the contempt and hatred which it excites in others. Such is the advantage of the *point of view,* in which it is seen by the *moral inquirer,* to whom it presents itself, not under its momentary character of pleasure, but under its lasting character of pain

and disgust. By habituating himself to consider the *remote*, as well as the *immediate* results of all the affections and passions, he learns to regard virtue, not merely as good in itself, at the moment in which it is called into exercise, but as an inexhaustible *source of good* which is continually encreasing; and vice, not merely as a temporary evil in itself, but as a *source of permanent and yet deeper misery and degradation.* Every generous principle, which nature has given him, is thus continually deriving new strength, from the very contemplation of the good which it affords; and if, in the frailty of mortality, he should still be subject to the occasional influence of those very passions, which, in cooler moments, he detests, he yet does not fall, *thoroughly and hopelessly.* There are *lingering* associations of moral beauty and happiness in his mind, which may *save him still*,—associations that must render it, in some degree at least, *more* difficult for *him* than for others, to yield to seductions, of which he has long known the vanity, and which perhaps even may, in some happier hour, *lead him back* to that virtue, of which he has never wholly forgotten the charms.

The charms of virtue, indeed, it is scarcely possible, for him who has felt them, wholly to forget. There may be eyes that can look unmoved on the external beauty which once delighted them. But who is there that has ever been alive to its better influence, who can think of moral loveliness without a feeling of more than admiration,—without a conscious enjoyment, in the possession of what is so truly

admirable, or a sigh at having lost the *privilege* of dwelling on it with delight, and at being obliged to shrink from the very thought of what it once appeared?

> " For what can strive
> With virtue? Which of nature's regions vast
> Can in so many forms produce to sight
> Such powerful beauty?—Beauty, which the eye
> Of Hatred cannot look upon secure;
> Which Envy's self contemplates, and is turn'd
> Ere long to tenderness, to infant smiles,
> Or tears of humblest love. Is aught so fair,
> In all the dewy landscapes of the Spring,
> The Summer's noontide groves, the purple eve
> At harvest-home, or in the frosty moon
> Glittering on some smooth sea, is aught so fair
> As virtuous friendship? As the honour'd roof,
> Whither, from highest heaven, immortal love,
> His torch ethereal, and his golden bow,
> Propitious brings, and there a temple holds,
> To whose unspotted service gladly vow'd,
> The social bond of parent, brother, child,
> With smiles, and sweet discourse, and gentle deeds,
> Adore his power? What gift of richest clime
> E'er drew such eager eyes, or prompted such
> Deep wishes, as the zeal, that snatcheth back
> From Slander's poisonous tooth a *foe's* renown,
> Or crosseth Danger in his lion-walk,
> A rival's life to rescue?"

The study of moral science, then, we have seen, has a direct tendency to strengthen our attachment to the virtues which we habitually contemplate. *Another* most important advantage derived from it, relates to us in our higher character of beings *capable of religion*, increasing our devotion and *gratitude* to

the Divinity, by the clearest manifestation which it gives us of his provident goodness in the constitution and government of the moral world.

The *external universe*, indeed, though our study were confined to the laws which regulate *its* phenomena, would afford, in itself, abundant proof of the power and wisdom by which it was created. But power and wisdom *alone* excite admiration only, not love; which, though it may be feigned in the homage that is universally paid to power, is yet, as an offering of the heart, paid to it only when it is combined with benevolence. It is the splendid benevolence, therefore, of the Supreme Being, which is the object of our grateful adoration; and, to discover this benevolence, we must look to creatures that have *not existence merely*, like inanimate things, but a *capacity* of enjoyment, and *means* of enjoyment. It is in man,—or in beings capable of knowledge and happiness, like man,—that we find the solution of the wonders of the creation; which would otherwise, with all its regularity and beauty, be but a solitary waste, like the barren magnificence of rocks and deserts. God, says Epictetus, has introduced man into the world, to be the spectator of his works, and of their divine Author; and not to be the spectator only, but to be the announcer and interpreter of the wonders which he sees and adores. Ὁ Θεὸς—τὸν ἄνθρωπον θεατὴν εἰσήγαγεν ἑαυτοῦ τε καὶ τῶν ἔργων τῶν αὐτοῦ· καὶ οὐ μόνον θεατὴν ἀλλὰ καὶ ἐξηγητὴν αὐτῶν.† "Hæc qui contemplatur," says another ancient Stoic,

† Dissertat. ab Arrian. collect. lib. i. c. 6.—p. 35. *Edit. Upton.*

with a little of the bold extravagance of his school,—"Hæc qui contemplatur, quid Deo præstat? Ne tanta ejus opera sine teste sint."—"Curiosum nobis natura ingenium dedit; et artis sibi ac pulchritudinis suae conscia, spectatores nos tantis rerum spectaculis genuit, perditura fructum sui, si tam magna, tam clara, tam subtiliter ducta, tam nitida, et non uno genere formosa solitudini ostenderet."*

In the study of what might be considered as the very defects of our moral nature, how pleasing is it, to the philosophic inquirer, to discover that provident arrangement of a higher Power, which has rendered many of the most striking of the apparent evils of life subservient to the production of a general utility, that had never entered into the contemplation of its remote authors. He who has never studied the consequences of human actions, perceives, in the great concourse of mankind, only a multitude of beings consulting each his own peculiar interest, or the interest of the very small circle immediately around him, with little, if any, apparent attention to the interests of others. But he who has truly studied human actions and their consequences, sees, in the prosecution of all these separate interests, that universal interest which is their great result; and the very principle of self-regard thus contributing to social happiness,—unconsciously indeed, but almost as surely as the principle of benevolence itself.

Each individual seeks a several goal,
But Heaven's great view is *one*, and that the whole.

* Seneca de otio Sapent. c. 32.

That counterworks each folly and caprice;
That disappoints the effect of every vice;—
All Virtue's ends from Vanity's can raise;
Which seeks no interest, no reward but praise;
And build on wants, and on defects of mind,
The joy, the peace, the glory of mankind.*

I have already,†—when treating of the influence of just views of the extent and limits of our faculties, in fixing the proper tone of inquiry, and lessening equally the tendency to the opposite extremes of dogmatism and scepticism,—stated some important moral advantages that arise from this very moderation of the tone of inquiry, particularly with respect to the temper with which it prepares us to receive dissent from our opinions without anger, or insolent disdain, or even astonishment. So much of the intercourse of human society consists in the reciprocal communication of opinions which must often be opposed to each other, that this preparation of the temper, whether for amicable and equal discussion, or for mutual silent forbearance, is not to be lightly appreciated as an element in the sum of human happiness. On this point, however, and on its relation to the still greater advantages, or still greater evils, of national or legislative tolerance or intolerance, I before offered some remarks, and therefore merely allude to it at present.

The tolerance with which we receive the opinions of others is a part, and an indispensible part, of that general refinement of manners to which we give the name of politeness. But politeness itself, in all its

* Pope's Essay on Man, Ep. ii. v. 237—240, and 245—248.
† Lect. III.

most important respects,—indeed in every respect, in which it is to be separated from the mere fluctuating and arbitrary forms and ceremonies of the month or year,—is nothing more than *knowledge of the human mind directing general benevolence.* It is the art of producing the greatest happiness, which, in the mere external courtesies of life, *can* be produced, by raising such ideas or other feelings in the minds of those with whom we are conversant, as will afford the most pleasure, and averting, as much as possible, every idea which may lead to pain. It implies, therefore, when perfect, a fine knowledge of the natural series of thoughts, so as to distinguish, not merely the thought which will be the *immediate* or *near* effect of what is said or done, but those which may arise still more *remotely*; and *he* is the most successful in this art of giving happiness, who sees the *future* at the greatest distance. It is this foresight, acquired by attentive observation of the various characters of mankind in a long intercourse with society, which is the true knowledge of the world; for the knowledge of the mere *forms and ceremonies* of the world, which is of far easier acquisition, is scarcely worthy of being called a part of it. The essential, and the only valuable part of politeness then, is as truly the result of study of the human mind, as if its minutest rules had formed a regular part of our systems of intellectual and moral philosophy. It is the philosophy indeed of those, who scarcely know that they are philosophizing; because *philosophy, to them,* implies something which has no other ornaments than *diagrams* and frightful *algebraic cha-*

racters, laid down in systems, or taught in schools and universities, with the methodical tediousness of rules of grammar; and they are conscious, that *all*, or the greatest part of what *they* know, has been the result of their own observation, and acquired in the very midst of the amusements of life. But *he, who knows the world, must* have studied the mind of man, or at least—for it is only a partial view of the mind which is thus formed—must have studied it in some of its most striking aspects. He is a *practical* philosopher, and, therefore, a *speculative* one also, since he must have founded his rules of action on certain principles, the results of his own observation and reflection. These results are, indeed, usually lost to all but to the individual; and the loss is not to be considered as slight, merely because the knowledge, which thus perishes, has been usually applied by its possessor to *frivolous* purposes, and sometimes perhaps to purposes still more unworthy. When we read the maxims of La Rochefoucauld, which, false as they would be, if they had been intended to give us a faithful universal picture of the moral nature of man, were unfortunately too faithful a delineation of the passions and principles that immediately surrounded their author, and met his daily view, in the splendid scenes of vanity and ambitious intrigue to which his observation was confined,—it is impossible not to feel, that, acute and subtle as they are, many of these maxims must have been only the expression of principles, which were floating, without being fixed in words, in the minds of many of his fellow-courtiers; and the instruction, which might be re-

ceived from those who have been long conversant with mankind, in situations favourable to observation, if, by any possibility, it could be collected and arranged, would probably furnish one of the most important additions which could be made to moral science.

How much politeness consists in knowledge of the natural succession of thoughts and feelings, and a consequent ready foresight of the series of thoughts, which it is in our power indirectly to excite or avert, must have presented itself in a very striking manner to every one, whose professional duties, or other circumstances, have led him to pay attention to the lower orders of society. The most benevolent of the poor, in situations too in which their benevolence is most strongly excited, as in the sickness of their relations or friends, and in which they exert themselves to relieve *obvious pain*, with an assiduity of watching and fatigue, after all the ordinary fatigues of the day, that is truly honourable to their tenderness, have yet little foresight of the *mere pains of thought*; and while, in the same situation, the rich and better educated, with equal, or perhaps even with *less* benevolence of intention, carefully avoid the introduction of any subject, which might suggest indirectly to the sufferer the melancholy images of parting life, the conversation of the poor, around the bed of their sick friend, is such as can scarcely fail to present to him every moment, not the *probability* merely, but almost the certainty of approaching death. It is impossible to be present, in these two situations, without remarking the benefit of a little knowledge of

the human mind, without which, far from fulfilling its real wishes, benevolence itself may be the most cruel of torturers.

The same species of foresight which is essential to the refinements of social intercourse, is equally essential in the active occupations of life, to *that knowledge of times and circumstances*, which is so important to success; and though this knowledge may be too often abused, to unworthy purposes, by the sordid and the servile, it is not the less necessary to those who pursue only honourable plans, and who avail themselves only of honourable means. Such is the nature of society, that the most generous and patriotic designs still require some *conduct* to procure for them authority; and, at least in the public situations of life, without a knowledge of the nature both of those who are to govern, and of those who are to be governed, though it may be very easy to *wish well* to society, the hardest of all tasks will be the task of *doing it good.*

May I not add, as another salutary moral effect of the Science of Mind, the tendency which the study of the *general properties* of our *common nature* has to lessen that undue veneration, which, in civilized society, must always attend the adventitious circumstances of fortune, and to bring this down, at least some degrees, nearer to that due *respect* which is indispensible for the tranquillity and good order of a state, and which no wise and patriotic moralist, therefore, would wish to see diminished. It is only in the tumultuous phrenzy of a revolution, however, or in periods of great and general discontent, that the re-

spect of the multitude for those who are elevated above them, in rank and fortune, is likely to fall *beneath* this salutary point. So many of the strongest principles of our nature favour the *excess* of it, that, in the ordinary circumstances of society, it must always pass *far beyond* the point of calm respect; *so* far beyond it, indeed, that the lesson which the people require most frequently to be taught, is, not to venerate the very guilt and folly of the rich and powerful, *because* they are the guilt and folly of the rich and powerful. It is to the objects of the idolatry themselves, however, that the study of a science, which considers them as stripped of every adventitious distinction, and possessing only the common virtues and talents of mankind, must be especially salutary. In the ordinary circumstances of a luxurious age, it is scarcely possible for the great to consider themselves as what they truly are; and though, if questioned as to their belief of their common origin with the rest of mankind, they would no doubt think the question an absurd one, and readily own their descent from the same original parentage; there can be as little doubt, that in the silence of their own mind, and in those hours of vanity and ambition, which, to many of them, are almost the whole hours of life, this tie of common nature is rarely, if ever felt. It is impossible, indeed, that it should be often felt, because, in the circumstances in which they are placed, there is *every thing* to remind them of a *superiority*, of which their passions themselves are sufficiently ready to remind them, and *very little* to remind them of an *equality*, from the contemplation

of which all their passions are as ready to turn away. There are, however, some circumstances which are too strong for all these passions to overcome, and which force, in spite of them, upon the mind that self-knowledge, which, in other situations, it is easy to avoid. In pain and sickness, notwithstanding all the vain magnificence which the pride of grandeur spreads around the couch, and the profusion of untasted delicacies, with which officious tenderness strives to solicit an appetite that loathes them, *he who lies upon the couch within, begins* to learn his own nature, and sees through the splendour that seems to *surround* him, as it were, without *touching* him, how truly foreign it is to that existence, of which before it seemed to form a part. The feeling that he is but *a man*, in the true sense of that word, as a frail and dependant being like those around him, is one of the first feelings, and perhaps not one of the least painful, which arise in such a situation. The impression, however, of this common nature is, while it lasts, a most salutary one; and it is to be regretted only, that health cannot return without bringing back with it all those flattering circumstances which offer the same seductions as before to his haughty superiority.

The sight of death, or of the great home of the dead, in like manner, seldom fails to bring before us our common and equal nature. In spite of all the little distinctions which a churchyard exhibits, in mimic imitation, and almost in mockery, of the great distinctions of life, the turf, the stone with its petty sculptures, and all the columns and images

of the marble monument; as we read the inscription, or walk over the sod, we think only of *what lies beneath in undistinguishable equality.* There is scarcely any one on whom these two great equalizing objects, sickness and the sight of death, have not produced, for a short time, at least, some salutary moral impression. But these are objects which cannot often occur, and which are accompanied with too many distressing circumstances, to render it desirable that they should be of very frequent occurrence. The study of the *mind,* of our *common moral and intellectual nature,* and of those *common hopes* which await us, as immortal beings, seems in some degree to afford the *advantage,* without the mixture of evil: for, though, in such speculative inquiries, the impression may be *less striking* than when accompanied with painful circumstances, it is more *permanent,* because, from the absence of those powerful circumstances, it is more frequently and willingly renewed. In the philosophy of mind, all those heraldic differences which have converted mere human vanity into a science, are as nothing. It is *man* that is the object of investigation, and man with no distinctions that are adventitious. The *feelings,* the *faculties,* which we consider, are endowments of the rich and powerful indeed; but they are endowments also of the meannest of those on whom they look with disdain. It is something, then, for those whose thoughts are continually directed by external circumstances, to that perilous elevation on which they are placed, to be led occasionally, as in such inquiries they must be, to measure *themselves* and *others* without regard

to the accidental differences of the heights on which they stand, and to see what it is in which they truly *differ*, and what it is in which they truly *agree*.

In the remarks already made, on the study of the Science of Mind, we have considered its effects on the progress of the other sciences, and on the moral dispositions. But, though the study had no effects of this kind, moral or intellectual, is not the mind itself a part of nature, and, *as a mere physical object*, deserving of our profoundest and most intent investigation? or shall it be said, that while we strive, not merely to measure the whole earth, and to follow in our thought the revolutions of these great orbs, whose majesty may almost be said to force from us this homage of admiration, but to arrange, in distinct tribes, those animalcular atoms, whose very existence we learn only from the glass through which we view them; the observing and calculating mind itself is less an object of universal science, than the antennae of an insect, or the filaments of a weed? Would it be no reproach to man, even though he knew all things besides, that he yet knew far less accurately than he *might* know, his own internal nature,—like voyagers who delight in visiting every coast of the most distant country, without the slightest acquaintance, perhaps, with the interior of their own?

> Qui terræ pelagique vias, mundique per omnes
> Articulos spatiatur ovans, metasque suorum
> Herculeas audet supra posuisse laborum,
> Neglectus jacet usque sibi, dumque omnia quærit,
> Ipse sui quæsitor abest; incognita tellus
> Solus nauta latet, propiorque ignotior orbis.

Would the lines which follow these, if indeed there were any one to whom they were applicable in their full extent, convey praise less high than that which might be given to the observer of some small nerve or membrane, that had never been observed before, or the discoverer of a new species of earth, in some pebble before unanalyzed?

> Tu melior Tiphys, spreto jam Phasidis auro,
> In te vela paras, animatos detegis orbes,
> Humanasque aperis ausis ingentibus oras.
> Jamque novos laxari sinus, animæque latentis
> Arcanas reserare vias, cœlosque recessus
> Fas aperire tibi, totamque secludere mentem.

To the *mind*, considered as a mere object of physical inquiry, there is one circumstance of interest, that is peculiar. It is the part of our mixed nature which we have especially in view as often as we think of *self*,—that by which we began to exist, and continue to exist, by which, in every moment of our being, we have rejoiced, and hoped, and feared, and loved; or rather, it is that which has been *itself*, in all our emotions, the *rejoicer*, the *hoper*, the *fearer*. To inquire into the history of the mind, therefore, is in truth to look back, as far as it is permitted to us to look back, on the whole history of our life. It is to think of those many pleasing emotions which delighted us when present, or of those sadder feelings, which, when considered as past, become delightful, almost like the feelings that were in themselves originally pleasing, and, in many cases, are reviewed with still greater interest. We cannot attempt to think of the origin of our knowledge, without bringing before

us scenes and persons most tenderly familiar; and though the effect of such remembrances is perhaps less powerful, when the mind is prepared for philosophical investigation, than in moments in which it is more passive, still the influence is not wholly lost. He must be a very cold philosopher indeed, who, even in intellectual analysis, can retrace the early impressions of his youth, with as little interest as that with which he looks back on the common occurrences of the past day.

But it is not any slight interest which it may receive from such peculiar remembrances, that can be said to give value to the philosophy of mind. It furnishes, in itself, the sublimest of all speculations, because it is the philosophy of the sublimest of all created things. "There is but one object," says St. Augustine, "greater than the soul, and that one is its Creator." "Nihil est potentius illa creatura quæ mens dicitur rationalis, nihil est sublimius. *Quicquid supra illam est jam Creator est.*" When we consider the powers of his mind, even without reference to the wonders which he has produced on earth, what room does man afford for astonishment and admiration! His senses, his memory, his reason, the past, the present, the future, the whole universe, and, if the universe have any limits, even more than the whole universe, comprized in a single thought; and, amid all these changes of feelings that succeed each other, in rapid and endless variety, a permanent and unchangeable duration, compared with which, the duration of external things is but the existence of a moment.

"O what a patrimony this! a being
Of such inherent strength and majesty,
Not worlds possest can raise it; worlds destroy'd
Not injure;* which holds on its glorious course,
When thine, O Nature, ends!" †

Such, in dignity and grandeur, is the mind, considered even abstractedly. But when, instead of considering the mind itself, we look to the wonders which it has performed—the cities, the cultivated plains, and all the varieties of that splendid scene to which the art of man has transformed the desarts, and forests, and rocks of original nature; when we behold him, not limiting the operations of his art to that earth to which he seemed confined, but bursting through the very elements, that appeared to encircle him as an insurmountable barrier—traversing the waves—struggling with the winds, and making their very opposition subservient to his course; when we look to the still greater transformations which he has wrought in the *moral scene*, and compare with the miseries of barbarous life, the tranquillity and security of a well ordered state; when we see, under the influence of legislative wisdom, insurmountable multitudes obeying, in opposition to their strongest passions, the restraints of a power which they scarcely perceive, and the crimes of a single individual marked and punished, at the distance of half the earth; is it possible for us to observe all these wonders, and yet not to feel some curiosity to examine the facul-

* Can't injure. *Orig.*

† Young's Night Thoughts, VI. v. 535—539.

ties by which they have been wrought, some interest in a being so noble, that leads us to speculate on the future wonders which he may yet perform, and on the final destiny which awaits him? This interest we should feel, though no common tie connected us with the object of our admiration; and we cannot surely admit that the object of our admiration is *less* interesting to us, or less sublime in nature, because the faculties which we admire are those which ourselves possess, and the wonders such as we are capable of achieving and surpassing.

LECTURE V.

ON THE NATURE OF PHYSICAL INQUIRY IN GENERAL.

THE preceding Lectures, Gentlemen, have, I trust, sufficiently convinced you of the *importance* of the science on which we are to enter,—if, indeed, many of the advantages which we have considered were not of *themselves* so obvious, as readily to have occurred to your own reflection, or at least to require less illustration, than,—in my desire to interest not your attention merely, but your zealous ardour, in a science which appears to me so truly to deserve it,—I have thought necessary to give them. We have seen, how interesting the mind is, as an object of study, *from its own intrinsic excellence*, even though it were to be considered in no other light, than as a mere part of the universal system of things, necessary, therefore, to be comprehended with every other existing substance, *in a system of general physics*. We have seen, likewise, in how many important respects, the study of the science of Mind is favourable to the growth of virtuous sentiment, and to the refinement and happiness of society; and, above all, how essential an acquaintance with it is, to the pro-

per conduct of our inquiries,—not merely in those sciences, the objects of which are kindred or analogous, but in every other science, the various objects of which, however independent, and even remote from it they may seem, must always be considered, not as they exist *in themselves*, but as they exist *in relation to it;* since they can be known to us only through the medium of the mental affections, or feelings, excited by them, which have laws peculiar to themselves, and analyzed and arranged only by our mental faculties, which have their own peculiar limits of extent and power.

The first great division of our course of inquiry is purely physiological. It has for its object the mind, considered as *susceptible* of various *states* or *affections*, and constituting, as it is thus variously affected, the whole phenomena of thought and feeling, which, though expressed by a *variety* of terms, of functions, or faculties, are still but the *one* mind, itself existing in different states. On retracing these states, which form the whole progress of our sentient, intellectual, and moral life, we have to inquire into the properties of the substance, mind, according to the same laws of investigation, by which we inquire into the properties of external substances,—not by assuming principles, from which the phenomena may be supposed to flow, but by observing and generalizing, till we arrive at those few simple prinples or *laws*, which, however pompous the term *laws* may seem, as if it denoted something different from the phenomena themselves, and paramount to them,

are, in truth, nothing more than the expression of the *most general circumstances, in which the phenomena themselves have been felt by us to agree.* As we say of gold, that it is that which is of a certain specific weight, yellow, ductile, fusible at a certain temperature, and capable of certain combinations,—because all these properties have been observed by ourselves or others,—so we say of the *mind,* that it is that which *perceives, remembers, compares,* and is susceptible of various *emotions* or other *feelings;* because of all these we have been conscious, or have observed them indirectly in others. We are not entitled to state with confidence any quality, as a property of gold, which we do not remember to have *observed ourselves,* or to have received on the faith of the observation of others, whose authority we have reason to consider as indubitable; and as little are we entitled to assert any quality, or general susceptibility, as belonging to the human *mind,* of which we have not been conscious ourselves in the feelings resulting from it, or for which we have not the authority of the indubitable consciousness of others. The exact coincidence, in this respect, of the physics of mind and of matter, it is important that you should have constantly before you, that you may not be led to regard the comparative indistinctness and vagueness of the mental phenomena, as a warrant for greater boldness of assertion, and looseness of reasoning with respect to them. There is, on the contrary, in such a case, still greater reason to adhere rigidly to the strict rules of philosophizing; because the less definite the phenomena are, the greater danger

is there of being misled in discriminating and classing them. The laws of inquiry, those general principles of the logic of physics, which regulate our search of truth in all things, external and internal, do not vary with the name of a science, or its objects or instruments. They are not laws of *one* science, but of *every* science, whether the objects of it be mental or material, clear or obscure, definite or indefinite; and they are thus universal, because, in truth, though applicable to *many sciences*, they are only laws of *the one inquiring mind*, founded on the weakness of its powers of discernment, in relation to the complicated phenomena on which those powers are exercised. The *sort* of reasoning which would be false in chemistry, would be false in astronomy, would be false in the physiology of our corporeal or intellectual and moral nature, and *in all*, for the same reason; because the mind is the inquirer in all alike, and is limited, by the very constitution of its faculties, to a certain order of inquiry, which it must, in this case of supposed erroneous *reasoning*, have transgressed.

On these *general laws of inquiry*, as relating alike to the investigation of the properties of *matter* and of *mind*, it is my intention to dwell, for some time, with full discussion; for, though the subject may be less pleasing, and may require more severe and unremitting attention on your part, than the greater number of the inquiries which await us, it is still more important than *any* of these, because it is, in truth, *essential to them all*. The season of your life is not that which gathers the harvest; it is that

which prepares the soil, by diligent cultivation, for the fruits which are to adorn and enrich it;—or, to speak without a metaphor, you do not come here, that you may make yourselves acquainted, in a few months, with all the phenomena of the universe,—as if it were only to look on the motions of the planets in an orrery, or to learn a few names of substances and qualities,—but that you may acquire those *philosophical principles*, which, in the course of a long and honourable life, are to enable you to render yourselves more familiar every day with the works of nature, and with the sublime plans of its beneficent Author:—and if, without the knowledge of a single word of fact, in matter or in mind, it were possible for you to carry away from these walls a clear notion of the objects of inquiry, and of the plan on which alone investigation can be pursued with advantage, I should conceive, that you had profited *far more*, than if, with confused notions of the objects and plan of investigation, you carried with you the power of talking fluently, of observations, and experiments, and hypotheses, and systems, and of using, in their proper places, all the hardest words of science.

I must remark, however, that I should not have thought it necessary, thus to direct so much of your attention to the principles of *scientific inquiry in general*, if I could have taken for granted, that you had already enjoyed the benefit of the instruction of my illustrious colleague in another Chair, whose Lectures on Natural Philosophy, *exemplifying* that soundness of inquiry, which I can only *recommend*,

would, in that case, have enlightened you *more*, as to the principles of physical investigation, than any mere rules, of which it is possible to point out to you the utility and the excellence.

All physical *science*, whatever may be the variety of objects, mental or material, to which it is directed, is nothing more than *the comparison of phenomena*, and the discovery of their *agreement* or *disagreement*, or *order of succession*. It is on *observation*, therefore, or on consciousness, which is only another name for *internal* observation, that the whole of science is founded; because there can be no comparison, without observation of the phenomena compared, and no discovery of agreement or disagreement, without comparison. So far, then, as man has *observed* the phenomena of matter or of mind, *so far, and no farther*, may he infer, *with confidence*, the properties of matter and of mind; or, in the words of the great primary aphorism of Lord Bacon, which has been so often quoted, and so often quoted *in vain*, "Homo, naturæ minister et interpres, tantum facit et intelligit, quantum de naturæ ordine re vel mente observaverit; nec amplius scit aut potest." *

What is it that we truly mean, however, when we say, that we are about to inquire into the nature and properties of any substance? The question is a most important one, and is far from being so simple as it may at first appear. From the mere misunderstanding of the import of this question, the bright-

* Nov. Org. Aph. 1.

est talents of a long succession of ages,—talents, which, with clearer views of *this single point*, might have anticipated all the discoveries of our own time, and introduced us, perhaps, to discoveries still more brilliant and astonishing, were wasted in inquiries as barren as the frivolous glory which attended them, —that produced indeed much contention, and more pride, but produced nothing more; and, without giving any additional knowledge, took away from ignorance only its humility, and its power of being instructed.

What is it that we truly have in view, or should have in view, when we inquire into the nature of a substance?

The material universe, and all the separate substances which compose it, may be considered in *two* lights,—either simply, as *composed of parts* that co-exist, and are to our feelings continuous, so as to form, of many separate and independent elements, one apparent *whole*; or of *parts that change their relative positions*, constituting, by this change of place, all the physical *events* of the material system of the world; and inquiry may have reference to a substance in both, or either of those points of view. What is this body? may be inquired of us, when any particular body is pointed out; and the answer which we give will be very different, according to the *particular* light in which we may have viewed it, though it *must* always relate to it in *one or other* of these two aspects. Let us suppose, for example, the body, concerning which the question is put, to

be a piece of glass; I select intentionally a substance which is familiar to you all, and of which many of you probably have sufficient chemical *knowledge* to be acquainted with the composition. It may be asked of us, then, What is the substance termed glass? and our answer will vary, as I have said, with the view which we take of it. If we consider it *merely as a continuous whole*, our answer will be, that it is a *compound of alkaline and siliceous matter*—meaning that particles of alkali and flint co-exist, and are apparently continuous, in that mass of which we speak.

Such is *one* of the answers which may be given to the question; and this sort of answer is one which is very commonly given to such questions. It is, you will perceive, nothing more than the enumeration of the constituent parts of the substance, and considers the substance, simply as it exists *alone*, without regard to any other bodies that may exist around it, or near it, and without any allusion to *change* of *any kind*.

This sort of view, however, may be altogether reversed; and, instead of thinking of the parts that exist together in the substance, without reference to any changes, of which it is either the *agent* or the *subject*, we may think *only of such changes*, without reference to its constituent parts.

In this latter point of view, we may say, in answer to the question, as to the nature of the substance termed glass, that it is a transparent substance, which, according to the general laws of refraction, bends the light that passes through it variously, according to the different density of the medium through which

the rays have immediately passed before arriving at it, or of the medium, through which they are to pass after penetrating it; that it is a substance fusible at a certain temperature, not dissolved by the common powerful acids, but soluble in a particular acid termed the *fluoric* acid; that, when strongly rubbed, by certain other substances, it communicates, for a time, to various bodies, the power of attracting or repelling other bodies; and we may add to our description, in like manner, as many other qualities as there are various substances which produce *in it* any change, or are in any way changed *by it*. In all answers of this kind, you will perceive that regard is uniformly had, not to *the mere substance*, concerning which the question is put, but also to some other substance with which, in consequence of some motion of one or other of the bodies, at the time of the phenomenon of which we speak, it has changed its relative position; for, if all the objects in nature remained constantly at rest, it is very evident that we could have no notion of any property of matter whatever. In the enumeration of the qualities of glass, for example, when we speak of its properties, we suppose it to have changed, in every case, some relative position with the *light* that passes through it, the *heat* that melts it, the *fluoric acid* that dissolves it, and the various bodies that excite in it, or conduct from it, electricity; and all these bodies, therefore, we must have in view, in our enumeration, as much as the glass itself.

As there are only these two different aspects in which matter can be viewed, all physical enquiry,

with respect to matter, *must*, as I have said, have reference to one of them; and if we think that we are inquiring further concerning it, our inquiry is truly without an object, and we know not what we seek. We may consider it, simply *as it exists in space*, or *as it exists in time*. Any substance, considered as it exists in space, is the mere name which ourselves give to the co-existence of a multitude of bodies, similar in nature, or dissimilar, in apparent continuity; considered *as it exists in time*, it is that which is affected by the prior changes of other bodies, or which itself produces a change of some sort in other bodies. *As it exists in space*, therefore, we inquire into its *composition*, or, in other words, endeavour to discover what are the elementary bodies that co-exist in the space which it occupies, and that are all which we truly consider, when we think that we are considering the compound as one distinct body. *As it exists in time*, we inquire into its *susceptibilities* or its *powers*, or, in other words, endeavour to trace all the series of prior and subsequent changes, of which its presence forms an intermediate link.

'*This*, then, is our meaning, when we speak of inquiring into the nature of a substance. We have *one*, or *both* of *two* objects in view, the discovery of the separate bodies that co-exist in the substance, or rather that constitute the substance, which is nothing more than the separate bodies themselves, or the discovery of that series of changes, of which the *presence* of this particular substance, in some new relative position with respect to other bodies, forms

apart; the changes which other bodies, in consequence of this altered relative position, occasion in *it*, with the changes which *it* occasions in other bodies.

On these two different objects of physical investigation, the co-existing elements of bodies, and their successions of changes, it may be of advantage to dwell a little more fully in elucidation of the method which we have to pursue in our own department of physical research; for, though it may perhaps at first appear to you, that to treat of the principles of inquiry, in the physics of *matter*, is to wander from the *intellectual* and *moral* speculations which peculiarly concern *us;* it is in truth only as they are illustrative of inquiries which we are to pursue in the *physiology of the mind*, that I am led to make these general remarks. The principles of philosophic investigation are, as I have already said, common to *all* the sciences. By acquiring more precise notions of the objects of any one of them, we can scarcely fail to acquire, in some degree, more precision in our notions of every other, and each science may thus be said to profit indirectly by every additional light that is thrown upon each. It is by this diffusive tendency of its spirit, almost as much as by its own sublime truths, and the important applications of these to general physics, that the study of geometry has been of such inestimable advantage to science. Those *precise definitions* which insure to every word the same exact signification, *in the mind of every one who hears it pronounced*, and that lucid progress, in the developement of truth after truth, which gives, even to ordinary powers, almost the

same facility of comprehension with the highest genius, are unquestionably of the utmost benefit to the mathematical student, while he is prosecuting his particular study, without any contemplation of other advantages to be reaped from them. But there can be no doubt that they are, at the same time, *preparing* his mind for excellence in other inquiries, of which he has then no conception; that he will ever after be less ready to employ, and be more quick-sighted than he would otherwise have been in detecting vague and indefinite phraseology, and loose and incoherent reasoning; and that a general spirit of exactness and perspicuity may thus at length be diffused in society, which will extend its influence, not to the sciences merely, but, in some faint degree, also to works of elegant literature, and even to the still lighter graces of conversation itself. "The *spirit of geometrical inquiry*," says Fontenelle, "is not so exclusively attached to geometry, as to be incapable of being applied to other branches of knowledge. A work of morals, of politics, of criticism, or even of eloquence, will, if all other circumstances have been the same, be the more beautiful, for having come from the hand of a geometrician. The order, the clearness, the precision, which, for a considerable time, have distinguished works of excellence on every subject, have most probably had their origin in that mathematical turn of thought, which is now more prevalent than ever, and which gradually communicates itself even to those *who are ignorant of mathematics*. It often happens that a single great man gives the tone to the whole age in which he lives; and we

must not forget, that the individual who has the most legitimate claim to the glory of having introduced and established a new art of reasoning, was an excellent geometer."* The philosopher to whom this improvement of the art of reasoning is ascribed, is evidently Descartes, whose claim is certainly much less legitimate than that of our own illustrious countryman; but the works of Bacon were not very extensively studied on the continent, at the time at which Fontenelle wrote; while, especially in France, the splendid reputation of the great geometer, who shook, as much with his own wild hypothesis, as with the weight of his reasoning, the almost idolatrous worship of the God of the Schools, seemed to sweep before it the glory of *every* other reformer. The instance of Descartes, however, is a still more happy one than his ingenious countryman, who was himself a Cartesian, could have imagined it to be. It is, indeed, impossible to conceive a more striking example of that diffusive influence of the *general spirit of scientific inquiry*, which I wished to illustrate; since, in this instance, it survived the very system by which it was diffused; all that was sceptical in that mixed system of scepticism and dogmatism which constituted the philosophy of Descartes, having long continued, and even now continuing, to operate beneficially, when scarcely a doctrine of his particular philosophy retains its hold.

You will not then, I trust, take for granted, that precise notions as to the objects of inquiry, in any science, even in the department of external physics,

* Préface aux Eloges—Œuvres, tom. v. p. 8.

can be so absolutely without benefit to our plans of inquiry into mind, which must be pursued on the same principles, if it be pursued with any prospect of success; and I may, therefore, safely solicit your attention to a little farther elucidation of the *two* objects which we have in view, in general physical inquiry, whether it be relative to *matter* or to *mind.*

To inquire into the composition of a substance, is to consider as *one,* many substances, which have not the less an independent existence, because they are in immediate proximity to each other. What we term *a body,* however minute, is a *multitude* of bodies, or, to speak more exactly, an *infinite number* of bodies, which appear limited *to us,* indeed, but may perhaps appear, in their true character of infinity, to beings of a higher order, who may be able to distinguish *as infinite,* what our limited senses allow us to perceive only as *finite.* They are *one,* not in nature, but in our *thought;* as one thousand individuals, that in nature must always be one thousand, receive a sort of unity that is relative merely to our conception, when ranked by us as a single regiment, or as many regiments become *one* by forming together an army. In the energies of external matter, the innumerable separate bodies are thus regarded by us as *one,* when the space which divides them is not measurable by our imperfect vision, and as distinct or separate, when the space can be measured by us. The *unity* of the aggregate is here no absolute quality of the mass, but is truly relative to the observer's power of distinguishing the component parts; the mass being *one* or *many,* as his senses are *less* or *better* able to distinguish these. This whole

globe of earth, with its oceans, and rivers, and mountains, and woods, and with all the separate multitudes of its animated inhabitants, may seem, to some being of another species, only one continuous and uniform mass; as the masses, that seem to us uniform and continuous, may seem a whole world of separate and varied parts, to the insect population that swarms upon its surface. "A single leaf of a tree," to borrow an obvious illustration from a French writer, "is a little world inhabited by invisible animals, to whose senses it appears of immense extent, who see in it mountains and abysses that are almost immeasurable, and who, from one side of the leaf to the other, hold as little communication with the opposite animalcula, who have their dwellings there, as we do with our Antipodes." *

Nothing can appear to our eyes more uniform than a piece of glass; yet we know, from its composition, as a product of art, that it is a congeries of bodies, which have no similarity to each other, and which truly exist separately from each other, in the compound, as they existed separately before the composition, though the lines of space which divide them have now ceased to be visible to our weak organs; and though, instead of being composed of alkaline and siliceous matter, which we know to be different in their qualities, the beautiful transparent substance, considered by us, were, as far as we know, *simple*, in the chemical sense of the term, it would still be as

* Fontenelle, Pluralité des Mondes, Conversat. 3.

truly an aggregate of many bodies, not dissimilar, indeed, as in the former case, but each similar in qualities to the aggregate itself. The aggregate, in short, is, in every case, but a name invented by ourselves; and what we term the constituent elements, are all that truly exists. To inquire into the composition of a body, is, therefore, only to inquire what these separate bodies are which we have chosen to consider as *one*, or rather which are ranked by us as one, from their apparent continuity.

I have dwelt the longer on this point of the *unity* of an aggregate mass, *as derived from the mind of the observer only*, and not from its *constituent bodies*, which are truly separate and independent of each other, and must always be separate and independent, whatever changes they may seem to undergo, in the various processes of composition and decomposition, because this is one of the most simple, and, at the same time, one of the most convincing examples of a tendency of the mind, which we shall often have occasion to remark in the course of our intellectual analysis,—the tendency to ascribe to substances without, as if existing in them like permanent physical qualities, the relations which ourselves have formed, by the mere comparison of objects with objects, and which, in themselves, as relations, are nothing more than modifications of our own mind. It is very difficult for us to believe, that, when we speak of a rock, or a mountain, or, perhaps, still more, when we speak of a single leaf or blade of grass as *one*, we speak of a plurality of *independent* substances, which may exist apart, as they now ex-

ist together, and which have no other unity than in our conception. It is the same with every other species of relation. The *tallness* of a *tree*, the *lowness* of a *shrub* or *weed*, as these relative terms are used by us in opposition, do not express any real quality of the tree, or shrub, or weed, but only the fact that *our mind has considered them together;* all which they express, is the mere comparison that is in *us*, not any quality in the external objects; and yet we can scarcely bring ourselves to think, but that, independently of this comparison, there *is* some quality, in the tree, which corresponds with our notion of *tallness*, and some opposite quality in the *shrub* or *weed*, which corresponds with our notion of shortness or *lowliness;* so that the tree would deserve the name of tall, though it were the only object in existence, and the *shrub* or *weed*, in like manner, the epithet of *lowly*, though *it* alone existed, without a single object with which it could be compared. These instances, as I have said, are simple, but they will not be the less useful, in preparing your minds for considering the more important natures of relation in general, that imply, indeed, always some actual qualities in the objects themselves, the perception of which leads us afterwards to consider them as *related*, but no actual quality in either of the objects that primarily and directly corresponds with the notion of the relation itself, as there are qualities of objects that correspond directly with our sensations of warmth or colour, or any other of the sensations excited immediately by external things. The relation is, in every sense of the word, *mental*, not mere-

ly as being *a feeling of the mind*, for our knowledge of the qualities of external things is, in this sense, equally *mental;* but, as having its cause and origin directly *in the very nature of the mind itself*, which cannot regard a number of objects, without forming some comparison, and *investing* them consequently with a number of relations. I have already spoken of the intellectual *medium*, through which external objects become known to us; and the metaphor is a just one. The medium, in this case, as truly as in the transmission of light, communicates something of *its own* to that which it conveys; and it is as impossible for us to perceive objects long or often *together*, without that comparison which instantly invests them with certain relations, as it would be for us to perceive objects, for a single moment, free from the tint of the coloured glass through which we view them. "Omnes perceptiones," says Lord Bacon, using a similar figure, "omnes perceptiones, tam sensûs quam mentis, sunt ex analogia hominis, non ex analogia universi; estque intellectus humanus instar speculi inæqualis ad radios rerum, qui suam naturam naturæ rerum immiscet, eamque distorquet et inficit."

But, whatever may be thought of relations in general, there can be no question, at least, as to the nature of that unity which we ascribe to bodies. We have seen, that the *substance*, which, in *thought*, we regard as *one*, is, in truth, not *one*, but *many* substances, to which our thought alone gives unity; and that all inquiry, therefore, with respect to the nature of a substance, *as it exists in space*, is an inquiry into the nature of those *separate bodies*, that

occupy the space which we assign to the *imaginary aggregate.*

To dissipate this imaginary aggregate of our own creation, and to show us those separate bodies which occupy its space, and are all that nature created, is the great office of the analytic art of *Chemistry,* which does for us only what the microscope does, that enables us to see the small objects, which are before us at all times, without our being able to distinguish them. When a chemist tells us, that glass, which appears to us one uniform substance, is composed of different substances, he tells us, what, with livelier perceptive organs, we might have known, without a single experiment; since the siliceous matter and the alkali were present to us in every piece of glass, as much *before* he told us of their presence, as after it. The art of analysis, therefore, has its origin in the *mere imperfection of our senses,* and is truly *the art of the blind,* whose wants it is always striving to remedy, and always discovering sufficient proof of its inability to remedy them.

We boast, indeed, of the chemical discoveries which we have made of late, with a rapidity of progress as brilliant, as it is unexampled in the history of any other science; and we boast justly, because we have found, what the generations of inquirers that have preceded us on our globe,—far from *detecting,*—had not even ventured to *guess.* Without alluding to the agency of the *Galvanic power,*—by which all nature seems to be assuming before us a different aspect,—we have seen fixed in the products of our common fires, and in the drossy rust of me-

tals, the purest part of that ethereal fluid which we breathe, and the *air* itself, which was so long considered as simple, ceasing to be an element. Yet, whatever unsuspected similarities and diversities of composition we may have been able to trace in bodies, all our discoveries *have not created a single new particle of matter*. They have only shown these to exist, *where they always existed*, as much *before* our analysis as *after* it,—unmarked indeed, but unmarked, only because our *senses alone* were not capable of making the nice discrimination. If man had been able to perceive, with his mere organs of sense, the different particles that form together the atmospheric air—if he had at all times seen the portion of these which unites with the fuel that warms him, enter into this union, as distinctly as he sees the mass of fuel itself, which he flings into his furnace, he could not have thought it a very great intellectual achievement, to state in words so common and familiar a fact,—the mere well-known change of place of a few well-known particles; and yet this is what, in the imperfect state of his perceptive organs, he so proudly terms his *Theory of Combustion*, the developement of which was hailed by a wondering world, and in these circumstances justly hailed by it, as a *scientific era*. To beings, capable of perceiving and distinguishing the different particles, that form, by their aggregation, those small masses, which, after the minutest mechanical division of which we are *capable*, appear atoms to us, the pride which we feel, in our chemical analyses, must seem as ludicrous, as to us would seem the pride of the blind, if one, who

had never enjoyed the opportunity of beholding the sun, were to boast of having discovered, *by a nice comparison of the changing temperature of bodies*, that, during certain hours of the day, there passed over our earth some great source of heat. The addition of one new sense to us, who have already the inestimable advantages which vision affords, might probably, in a few hours, communicate more instruction, with respect to matter, than all which is ever to repay and consummate the physical labours of mankind,—giving, perhaps, to a single glance those slow revelations of nature, which, one by one, at intervals of many centuries, are to immortalize the future sages of our race.

"All philosophy," says an acute foreign writer, "is founded on these two things,—that we have a great deal of curiosity, and very bad eyes. In astronomy, for example, if our *eyes* were better, we should then see distinctly, whether the stars really are, or are not, so many *suns*, illuminating worlds of their own; and if, on the other hand, we had less *curiosity*, we should then care very little about this knowledge, which would come pretty nearly to the same thing. But we wish to know *more than we see*, and there lies the difficulty. Even if we saw *well* the little which we do see, this would at least be some small knowledge gained. But we observe it *different from what it is;* and thus it happens, that a true philosopher passes his life, in not believing what he sees, and in labouring to guess what is altogether beyond his sight. I cannot help figuring to myself," continues the same lively writer, "that nature is a

great public spectacle, which resembles that of the opera. From the place at which we sit in the theatre, we do not see the stage quite as it is. The scenes and machinery are arranged, so as to produce a pleasing effect at a distance; and the weights and pullies, on which the different movements depend, are hid from us. We therefore do not trouble our heads with guessing, how this mechanical part of the performance is carried on. It is perhaps only some mechanician, concealed amid the crowd of the pit, who racks his brain about a flight through the air, which appears to him extraordinary, and who is seriously *bent* on discovering by what means it has been executed. This mechanic, gazing, and wondering, and tormenting himself, in the pit of the opera, is in a situation very like that of the philosopher in the theatre of the world. But what augments the difficulty to the philosopher, is, that, in the machinery which nature presents, the cords are *completely* concealed from him,—so completely indeed, that the constant puzzle has been to guess, what that secret contrivance is, which produces the visible motions in the frame of the universe. Let us imagine all the sages collected at an opera,—the Pythagorases, Platos, Aristotles, and all those great names, which now-a-days make so much noise in our ears. Let us suppose, that they see the flight of Phaëton, as he is represented carried off by the winds; that they cannot perceive the cords to which he is attached; and that they are quite ignorant of every thing behind the scenes. It is a *secret virtue*, says one of them, that carries off Phaëton. Phaëton, says

another, is composed of certain *numbers*, which cause him to ascend. A third says, Phaëton has a certain *affection* for the top of the stage. He does not feel *at his ease*, when he is not there. Phaëton, says a fourth, is not formed to fly; but he *likes better to fly, than to leave the top of the stage empty*,—and a hundred other absurdities of the kind, that might have ruined the reputation of antiquity, *if* the reputation of antiquity for wisdom could have been ruined. At last, come Descartes, and some other moderns, who say, Phaëton ascends, because he is drawn by cords, and because a weight, more heavy than he, is descending as a counterpoise. Accordingly, we now no longer believe, that a body will stir, unless it be drawn or impelled by some other body, or that it will ascend, or descend, unless by the operation of some spring or counterpoise; and thus to see nature, such as it really is, is to see the back of the stage at the opera."*

In this exposition of the phenomena of the universe, and of those strange "follies of the wise," which have been gravely propounded in the systems of philosophers concerning them, there is much truth, as well as happy pleasantry. As far, at least, as relates to matter, *considered merely as existing in space*,—the first of the two lights in which it may be physically viewed,—there can be no question, that philosophy *is* nothing more than an endeavour to repair, by art, the badness of our eyes, that we may be able to see *what is actually before us at every*

* Fontenelle, Pluralité des Mondes, Conversat. 1.

moment. To be fairly behind the scenes of the great spectacle of nature, however, is something more than this. It is not merely to know, at any one moment, that there are many objects existing on the stage, which are invisible where the spectators sit, but to know them *as pieces of machinery,* and to observe them operating in all the wonders of the drama. It is, in short, to have that *second* view of nature, *as existing in time as well as space,* to the consideration of which I am to proceed in my next Lecture.

LECTURE VI.

THE SAME SUBJECT CONTINUED.

In my last Lecture, Gentlemen, I considered, at some length, the nature of *Physical Inquiry in general*, and stated to you, in particular, the *two lights*, in which objects may be physically viewed, as existing *simply in space*, or as existing *in time*,—the inquiries, with respect to the *one*, having regard to the *composition* of bodies; the inquiries, with respect to the other, having regard to the changes, of which they are either the *subjects* or *occasions*, and consequently to their *susceptibilities* or their *powers* —their *susceptibilities* of being affected by other substances, their *powers* of affecting other substances. I use the word *susceptibility*, you will perceive, as, in this case, synonymous with what Mr Locke, and some other writers, have denominated *passive power*, to avoid the apparent verbal contradiction, or at least the ambiguity, which may arise from annexing the term *passive* to a word, which is generally employed to signify, not the *subject* of change, but the *cause* or *occasion* of change.

Of these two points of view, then, in which an object may be regarded, when the question is put, *What is it?* we have seen, I hope, sufficiently distinctly, the nature of one. If, in answering the question, we regard the object *merely as it exists in space*, and say, that it is a *compound* of certain substances, we mean nothing more, than that, in the portion of space, which we conceive to be occupied by this one *imaginary* aggregate, there is truly a plurality of bodies, which, though *seemingly* contiguous, have an existence, as separate and independent of each other, as if they were at the most remote distance; the *one aggregate* being nothing more than a *name* for these separate bodies, to which ourselves give all the unity which they have, merely by considering them as *one*.

The necessity of inquiring into the nature of these *separate* elementary bodies,—which constitutes one of the two great departments of physical investigation,—we found to arise from the imperfection of our senses, that are not sufficiently acute to discover, of themselves, the component parts of the *masses*, which nature everywhere presents to us. We are thus obliged to form to ourselves an *art of analysis*, merely that we may perceive *what is constantly before our eyes*, in the same manner, as we are obliged to have recourse to the contrivances of the optician, to perceive stars and planets, that are incessantly shedding on us their light.

There is, indeed, something truly worthy of our astonishment, in the sort of knowledge of the qualities of matter, which, with our very imperfect

senses, we are still able to attain. What we conceive ourselves *to know* is an aggregate of many bodies, of each of which, individually, we may be said, in the strictest sense of the term, to be absolutely ignorant; and yet the aggregate, which we know, has no real existence, *but as* that very multitude of bodies, of which we are ignorant. When water was regarded as a *simple substance*, every one, who looked upon a lake or river, conceived that he knew as well what the liquid was which flowed in it, as the chemist, who now considers it as compound; and the chemist, who has learned to regard it as compound, is perhaps as ignorant of the true nature of the separate bodies that exist in it, as those who formerly regarded it as simple; since one additional discovery may prove the very elements, which he now regards as the ultimate constituents of water, to be truly compounded of other elements, still more minute, and now altogether unknown to him.

That our only knowledge of matter should be of a multitude of bodies, of the nature of each of which individually, we are in absolute ignorance, may seem, at first sight, to justify many of the most extravagant doubts of the sceptic: and yet there is really no ground for such scepticism, since, though the *coexisting* bodies be *separately* unknown, the effect, which they produce *when coexisting* in the circumstances observed by us, is not the less certain and definite; and it is *this joint effect of the whole*, thus certain and definite, which is the true object of our knowledge; not the uncertain effect, which the mi-

nuter elements *might* produce, if they existed alone. The *same aggregates*, whatever their elementary nature may be, operate on our senses, as often as they recur, *in the same manner;* the unknown elements which constitute an oak, or a tower, or the ivy that clings around it, exciting in the mind those particular sensations, to the external causes of which we continue to give the name of *oak* or *tower* or *ivy*; and exciting these, as precisely and uniformly, as if we were acquainted with each minute element of the objects without. Our knowledge of nature must, in this way, indeed, be confined to the *mixed effects* of the masses which it exhibits; but it is not on that account less valuable, nor less *sure;* for to *the certainty of this limited knowledge* all which is necessary is *uniformity of the mixed effects*, whatever their unknown coexisting causes may be. It is with *masses* only, not with *elements* that we are concerned, in all the important purposes of life; and the provident wisdom of the Author of Nature, therefore, has, in this as in every other case, adapted our powers to our necessities,—giving to all *mankind* the knowledge, that is requisite for the purposes which all mankind must equally have in view, and leaving to a few philosophic inquirers, the curiosity of discovering what the substances around us truly are in their elementary state, and the means of making continual progress, in this never-ending analysis.

Such then is the nature of *one* of the views, in which physical inquiry may be directed, to the discovery of *elements, that are existing together, at*

the same moment. But is not this species of inquiry, it may be asked, peculiar to *matter*, or may it also be extended to *mind?* It is easy to conceive that, if matter always have extension, and therefore necessarily be composed of parts, an inquiry into *its* composition may form an important part of physical investigation; but this sort of inquiry will seem to you altogether inadmissible in the *philosophy of mind*, since the mind is not composed of parts that coexist, but is simple and *indivisible*. If, indeed, the term composition, in this application of it, be understood strictly in the same sense as when applied to matter, it is very evident, that there can be no inquiry into the *composition of thoughts and feelings*, since every thought and feeling is as simple and indivisible as the mind itself; being, in truth, nothing more than the *mind itself existing at a certain moment in a certain state;* and yet, in consequence of some very wonderful laws, which regulate the successions of our mental phenomena, the science of mind is, in all its most important respects, a science of analysis, or at least a science which exhibits to our contemplation the same results as if it were strictly analytical; and we enquire into the separate ideas or other feelings, involved in one complex thought or emotion, very nearly as we inquire into the corpuscular elements, that coexist in one seemingly continuous mass. The nature of this very wonderful application of analysis, or at least of a process which is virtually the same as analysis, to a substance, that is necessarily at all times simple and indivisible, will, however, be better understood by

you, after we have turned our attention to the other general division of physical inquiry, which is still to be considered by us. I need not, I hope, repeat, after the remarks which I made in my last Lecture, that, in leading your thoughts, for so long a time, to the subject of *general* science, I have had constantly in view its application to the phenomena of our own department of it, and that we are truly learning to study *mind* with accuracy, when we are learning what it is, which is to be studied in the great system of things. There can be no question at least, that he who has erroneous notions of the objects of physical investigation in the material universe, will be very likely also to err, or rather cannot fail to err, in his notions of the objects of physical investigation, as it relates to mind.

I proceed, then, to consider, what it is which we truly have in view, when we direct our inquiry, not to the mere composition of objects existing *continuously in space*, but to the *succession* of *changes* which they exhibit *in time*,—to their *susceptibility of being affected by other substances*, or their *power of affecting other substances*. The inquiry, as you must perceive, involves the consideration of some words about which a peculiar mystery has been very generally supposed to hang—*causation*, *power*, *connexion* of events. But we shall perhaps find that what is supposed so peculiarly mysterious in them, is not in the very simple notions themselves, but in the misconceptions of those who have treated of them.

It is not in this case, as in the former depart-

ment of physical investigation, the *mere imperfection of our senses*, that produces the necessity of inquiry. Matter, as existing in space, is *wholly before us*, and all which is necessary for perfect knowledge of it, in this respect, is greater delicacy of our perceptive organs, that we may distinguish *every* element of the seemingly continuous mass. To know the mere *composition* of a substance, is to know only what *is actually present at the very moment*, which we may imagine senses of the highest perfection to be capable of instantly perceiving; but to know all the *susceptibilities* and *powers* of a substance, the various modes in which it may affect or be affected by every other, is to know it, not merely as it exists before us, in the particular circumstances of any one moment, but as it *might* have existed, or *may* exist, in all possible circumstances of combination,—which our senses, that are necessarily confined to the circumstances of the present moment, never could teach us, even though they were able to distinguish every atom of the minutest mass.

If, indeed, there were any thing, in the mere appearance of a body, which could enable us to predict the changes that would take place in it, when brought into every possible variety of situation, with respect to other bodies, or the changes which it would then produce in those other bodies, the two views, into which I have divided physical inquiry, would coincide exactly; so that to know the *continuous elements* of any substance, would be to know, at the same time, its *susceptibilities* and

powers. But there is nothing, in the mere sensible qualities of bodies, considered separately, that can give us even the slightest intimation of the changes, which, *in new circumstances of union*, they might reciprocally *suffer* or *produce.* Who could infer, from the *similar* appearance of a lump of sugar and a lump of calcareous spar, that the one would be soluble in water, and the other remain unmelted; or, from the *different* aspect of gunpowder and snow, that a spark would be extinguished, if it fell upon the *one*, and, if it fell upon the other, would excite an explosion that would be almost irresistible? *But for experience*, we should be altogether incapable of predicting any such effects, from *either* of the objects compared; or, if we did know, that the peculiar susceptibility belonged to one of the two, and not the other, we might as readily suppose, that calcareous spar would melt in water as sugar, and as readily, that *snow* as that *gunpowder* would detonate, by the contact of a spark. It is *experience alone*, which teaches us that these effects *ever* take place, and that they take place, not in all substances, but only in *some* particular substances.

It has, indeed, been supposed by many ingenious philosophers, that, if we were acquainted with what they term the *intimate structure* of bodies, we should then see, not merely *what* corpuscular changes take place in them, but *why* these changes take place in them; and should thus be able to predict, before experience, the effects which they would reciprocal-

ly produce. "I doubt not," says Locke, "but if we could discover the figure, size, texture, and motion of the minute constituent parts of any two bodies, we should know without trial several of their operations one upon another, as we do now the properties of a square or a triangle. Did we know the mechanical affections of the particles of rhubarb, hemlock, opium, and a man; as a watch-maker does those of a watch, whereby it performs its operations, and of a file, which by rubbing on them will alter the figure of any of the wheels; we should be able to tell before-hand, that rhubarb will purge, hemlock kill, and opium make a man sleep; as well as a watch-maker can, that a little piece of paper laid on the balance will keep the watch from going, till it be removed; or that, some small part of it being rubbed by a file, the machine would quite lose its motion, and the watch go no more. The dissolving of silver in aquafortis, and gold in aqua regia, and not *vice versa*, would be then perhaps no more difficult to know, than it is to a smith to understand why the turning of one key will open a lock, and not the turning of another. But whilst we are destitute of senses acute enough to discover the minute particles of bodies, and to give us ideas of the mechanical affections, we must be content to be ignorant of their properties and ways of operation; nor can we be assured about them any farther, than some few trials we make are able to reach. But whether they will succeed again another time, we cannot be certain. This hinders our certain knowledge of universal truths concerning natural bodies;

and our reason carries us herein very little beyond particular matter of fact.

"And therefore I am apt to doubt, that how far soever human industry may advance useful and experimental philosophy in physical things, scientifical will still be out of our reach; because we want perfect and adequate ideas of those very bodies which are nearest to us, and most under our command. Those which we have ranked into classes under names, and we think ourselves best acquainted with, we have but very imperfect and incomplete ideas of. Distinct ideas of the several sorts of bodies that fall under the examination of our senses perhaps we may have; but adequate ideas, I suspect, we have not of any one amongst them. And though the former of these will serve us for common use and discourse, yet whilst we want the latter, we are not capable of scientifical knowledge; nor shall ever be able to discover general, instructive, unquestionable truths concerning them. Certainty and demonstration are things we must not, in these matters, pretend to. By the colour, figure, taste, and smell, and other sensible qualities, we have as clear and distinct ideas of sage and hemlock, as we have of a circle and a triangle; but having no ideas of the particular primary qualities of the minute parts of either of these plants, nor of other bodies which we would apply them to, we cannot tell what effects they will produce; nor when we see those effects, can we so much as guess, much less know, their manner of production. Thus having no ideas of the particular mechanical affections of the minute

parts of bodies that are within our view and reach, we are ignorant of their constitutions, powers, and operations: and of bodies more remote we are yet more ignorant, not knowing so much as their very outward shapes, or the sensible and grosser parts of their constitutions."*

The fallacy of the reasoning of this very eminent philosopher consists partly, in the present case, in a sort of *petitio principii*, or, at least, a false assumption that is involved in the very phrase *mechanical affections*, and in all the mechanical illustrations adduced. *If* rhubarb purge, and hemlock kill, *by qualities that can be said to be mechanical*, and if these qualities be PERMANENT, there can be no question, that to know accurately the *mechanical qualities* of these substances, in relation to the human body, would be to know, that rhubarb *must* purge, and hemlock kill, as much as to know the mechanism of a watch would be to know, that the watch *must* stop if a small part of it were rubbed by a file. But the inquiry is still left, whether it *be* thus, by the mere principles of mechanical action, that rhubarb and hemlock produce their peculiar effects on the animal system, and that silver is dissolved in aquafortis, and gold in aqua regia; and, if there be no reason whatever to suppose this, we must then surely admit, that the prophecy would still be beyond our power, *though* we were acquainted with "the figure, size, texture, and motion, of the minute constituent parts" of the different bodies. In the same manner, as, in

* Essay concerning Human Understanding, book iv. c. 3. sect. 25. 26.

the mechanical division of a substance, we must still come to *other* substances capable of further division, so, though we could reduce *all* the changes that appear to be wrought in the great masses around us, to the changes wrought in their minute parts, we must still come to *certain ultimate changes* as inexplicable as those which we see at present. It is as difficult to predict, without experience, the motion of *one atom* to or from *another atom*, as the motion of one *mass of atoms* to or from another *mass of atoms*. That the globe of the earth should tend towards the sun, which is at so great a distance from it, and should thus be every moment *arrested* within that orbit, from which, if there were no such deflecting force, it would every moment have a tendency to escape by flying off in a straight line, is, indeed, most wonderful. But precisely the same laws which operate on the whole globe of the earth, operate on every particle of which the earth is composed,—since *the earth itself* is only these separate particles under another name; and if it be wonderful that *all of these* should have a tendency to approach the sun, it must be equally wonderful, that each minute constituent particle should tend individually, though, to use Mr Locke's words, we were accurately acquainted with the "figure, size, texture, and motion of each." The same original mystery of gravitation, then, would remain, though our senses enabled us to discover every gravitating particle in the intimate structure of the gravitating mass. By knowing the intimate structure of bodies, we should, indeed, know *what* were their elements mutually af-

fected, but not *why* these elements were mutually affected, or were affected in *one* way rather than in *another*.

The chief error of Mr Locke, in this respect, evidently consisted, as I have said, in his assumption of the very thing to be proved, by taking for granted, that all the changes of bodies are the effects of their immediate contact and impulse, and of a kind, therefore, which may be termed strictly mechanical,—an assumption, indeed, which harmonized with the mathematical chemistry and medicine of the age in which he lived, but of the justness of which there is not the slightest evidence in the general phenomena, chemical and nervous, of which he speaks. If, instead of confining his attention to the action of bodies in apparent contact, he had turned his thought to the great distant agencies of nature in the motions of the planetary world, it is scarcely possible to conceive that he should not have discovered his mistake. In another of his works, his *Elements of Natural Philosophy*, he has stated very justly, as a consequence of the law of gravitation, that if the earth were the sole body in the universe, and at rest, and the moon were suddenly created at the same distance from the earth as at present, the earth and the moon would instantly begin to move towards one another in a straight line. What knowledge of the "figure, size, and texture," of the particles of the earth could have enabled its human inhabitants to predict this instant change? and if the particles of gold and aqua regia, and of hemlock, rhubarb, and opium, which, together with all the other par-

ticles of our globe, would, in the case supposed, instantly begin to move towards the moon,—can thus attract and be attracted, in gravitation, with tendencies that are independent of every mechanical affection, what authority can there be for supposing, that the chemical and vital agencies of the same particles *must* be mechanical, or that the one set of changes could have been predicted *a priori*, if the other was confessedly beyond the power of philosophic divination?

But even with regard to the mechanical affections of matter themselves, though all the changes which take place in nature *were* truly reducible to them, we should still have ultimately the same difficulty in attempting to predict, without experience, the changes that would ensue from them. The mechanical properties are indeed the most familiar to our thought, because they are those which we are constantly witnessing in the great displays of human power that are most striking to our senses. The house, the bridge, the carriage, the vessel, every implement which we use, and the whole wide surface of the cultivated earth, present to us, as it were, one universal trophy of the victories of the great mechanist, man. We cannot look back to the time when we were ignorant of the mechanical properties of matter; but still there was a time when they first became known to us, and became known by experience of the motions that resulted from them. What can be simpler than the phenomena of impulse? That a ball in motion, when it meets another at rest, should force this to quit its place, appears now to be something which it

required no skill or experience to predict; and yet, though our faculties were, in every respect, as vigorous as now,—if we could imagine this most common of all phenomena to be wholly unknown to us,—what reason should we be able to discover in the circumstances that immediately precede the shock, for inferring the effect that truly results, rather than any other effect whatever? Were the laws of motion previously unknown, it would be in itself as presumable, that the moving ball should simply stop when it reached the other, or that it should merely rebound from it, as that the quiescent ball should be forced by it to quit its state of rest, and move forward in the same direction. We know, indeed, that the effect is different, but it is because we have witnessed it that we know it; not because the laws of motion, or any of the mechanical affections of matter whatever are qualities that might be inferred independently of observation.

Experience, then, is necessary in every case, for discovering the mutual tendencies of the *elements* of bodies, as much as for determining the reciprocal affections of the *masses*. But experience teaches us the *past only*, not the *future*; and the object of physical inquiry is, not the mere solitary fact of a change which has taken place, but the *similar changes* which will continually take place as often as the objects are again in the same circumstances,—not the *phenomena* only, but the *powers* by which the phenomena are produced.

Why is it, then, we believe that continual similarity of the future to the past, which constitutes, or

at least is implied, in our notion of power? A stone tends to the earth,—a stone will always tend to the earth,—are not the same proposition; nor can the *first* be said to involve the *second.* It is not to experience, then, alone that we must have recourse for the origin of the belief, but to some other principle, which converts the *simple facts* of experience into a general expectation, or confidence, that is afterwards to be physically the guide of all our plans and actions.

This principle, since it cannot be derived from experience itself, which relates only to the past, must be an original principle of our nature. There is a tendency in the very constitution of the mind from which the expectation arises,—a tendency that, in every thing which it adds to the mere facts of experience, may truly be termed *instinctive;* for though that term is commonly supposed to imply something peculiarly mysterious, there is no more *real* mystery in it than in any of the simplest successions of thought, which are all, in like manner, the results of natural tendency of the mind to exist in certain states, after existing in certain other states. The belief is, a state or feeling of the mind as easily conceivable as any other state of it,—a new feeling, arising in certain circumstances as uniformly as in certain other circumstances. There arise other states or feelings of the mind, which we never consider as mysterious; those, for example, which we term the sensations of sweetness or of sound. To have our nerves of taste or hearing affected in a certain manner, is not, indeed, to taste or to hear, but it is *im-*

mediately afterwards to have those particular sensations; and this merely because the mind was originally so constituted, as to exist directly in the one state after existing in the other. To observe, in like manner, a series of antecedents and consequents, is not, in the very feeling of the moment, to believe in the future similarity, but, in consequence of a similar original tendency, it is immediately *afterwards* to *believe*, that the *same antecedents* will *invariably* be *followed* by the *same consequents*. That this *belief of the future* is a state of mind very different from the mere *perception or memory of the past*, from which it flows, is indeed true; but what resemblance has *sweetness*, as a *sensation of the mind*, to the *solution* of a few particles of sugar on the tongue,—or the harmonies of music, to the vibration of particles of air? All which we know, in both cases, is, that these successions regularly take place; and in the regular successions of nature, which could not, in one instance more than in another, have been predicted without experience, *nothing* is mysterious, or *every thing* is mysterious. It is wonderful, indeed,—for what is not wonderful?—that *any belief* should arise as to a *future* which as yet has *no existence;* and which, therefore, cannot, in the strict sense of the word, be an object of our knowledge. But, when we consider Who it was who formed us, it would, in truth, have been *more* wonderful, if the mind had been so differently constituted that the belief had *not* arisen; because, in that case, the phenomena of nature, however regularly arranged, would have been arranged in vain, and that Almighty Be-

ing, who, by enabling us to foresee the physical events that are to arise, has enabled us to provide for them, would have left the creatures, for whom he has been so bounteously provident, to perish, ignorant and irresolute, amid elements that seemed waiting to obey them,—and victims of confusion, in the very midst of all the harmonies of the universe.

Mr Hume, indeed, has attempted to shew, that the belief of the similarity of future sequences of events is reducible to the influence of custom, without the necessity of any intuitive expectation; but he has completely failed in the reasoning with which he has endeavoured to support this opinion. Custom may account for the mere suggestion of one object by another, as a part of a train of images, but not for that belief of future realities, which is a very different state of mind, and which, perhaps, does not follow every such suggestion, however frequent and habitual. The phenomenon A, a stone has a thousand times fallen to the earth; the phenomenon B, a stone will always, in the same circumstances, fall to the earth;—are propositions that differ as much as the propositions, A, a stone has *once* fallen to the earth; B, a stone will *always* fall to the earth. At *whatever* link of the chain we begin, we must still meet with the same difficulty—*the conversion of the past into the future.* If it be absurd to make this conversion at *one* stage of inquiry, it is just as absurd to make it at *any other stage;* and, as far as our memory extends, there never was a time at which we did not make the instant conversion,—no period, however early, at which we were capable of knowing

that a stone had fallen, and yet believed that, in exactly the same circumstances, there was no reason to suppose that it would fall again. But on this particular error of Mr Hume, the very narrow outline, within which the present sketch is necessarily bounded, will not permit me to enlarge. I have examined it, at considerable length, in the third edition of the Inquiry which I have published on the Relation of Cause and Effect.

It is more immediately our present purpose to consider, What it truly is which is the object of inquiry, when we examine the physical successions of events, in whatever manner the belief of their similarity of sequence may have arisen? Is it the mere series of regular antecedents and consequents themselves? or, Is it any thing more mysterious, which must be supposed to intervene and connect them by some invisible bondage?

We see, in nature, one event *followed* by another. The fall of a spark on gunpowder, for example, followed by the deflagration of the gunpowder; and, by a peculiar tendency of our constitution, which we must take for granted, whatever be our theory of power, we believe, that, as long as all the circumstances continue the same, the sequence of events will continue the same; that the deflagration of gunpowder, for example, will be the *invariable consesequence* of the fall of a spark on it;—in other words, we believe the gunpowder to be *susceptible* of deflagration on the application of a spark,—and a spark to have the *power* of deflagrating gunpowder.

There is nothing more, then, understood in the trains of events, however regular, than the regular order of antecedents and consequents which compose the train; and between which, if any thing else existed, it would itself be a part of the train. All that we mean, when we ascribe to one substance a *susceptibility* of being affected by another substance, is, that *a certain change will uniformly take place in it when that other is present;*—all that we mean, in like manner, when we ascribe to one substance a *power* of affecting another substance, is, that, *when it is present, a certain change will uniformly take place in that other substance.* Power, in short, is significant not of any thing different from the invariable antecedent itself, but of the mere invariableness of the order of its appearance in reference to some invariable consequent,—the invariable antecedent being denominated a *cause*, the invariable consequent an *effect.* To say, that water has the *power of dissolving salt*, and to say, that salt will *always melt* when water is poured upon it, are to say precisely the same thing;—there is nothing in the *one* proposition, which is not exactly, and to the same extent, enunciated in the other.

It would, indeed, be a very different theory of causation, if, without taking into account the important circumstance of invariableness, or the *uniform certainty of being at all times* followed by a particular event, we were to say, that power is mere antecedence; for there can be no question, that phenomena precede other phenomena, which we never consider as having any permanent relation to them. They

are regarded as antecedents, but not invariable antecedents, and the reason of this is obvious. Innumerable events are constantly *taking place together* in the immense system of the universe. There must, therefore, always be innumerable *co-existing* series, the parts of each of which, though permanently related to each other, may have no permanent relation to the parts of the *other* series; and one event of *one series*, may thus precede, not its own effect merely, which is to be its constant and uniform attendant, in all similar circumstances, but the events also of *other* co-existing series, which may never occur with it again at the same moment. There is no superstition in believing that an eclipse *may* be followed by a pestilence, or an unpleasant dream by some unforeseen calamity of the day, though there would be much superstition in believing, that these antecedents and consequents had any *permanent* relation to each other. In ordinary and familiar cases, at least, every one knows sufficiently the distinction of what is thus *casual* only, and what is *invariable* in the order of nature. Yet it is only by losing all sight of a distinction so very obvious, and confounding invariable with casual consequences, that Dr Reid, and other eminent philosophers, have been led into much laborious argumentation, in the confidence of confuting one of the simplest and justest of metaphysical opinions. To prove that power is more than *invariable* antecedence, they prove that it is more than *casual* antecedence, and that events do not follow each other, loosely and confusedly, as if antecedents *could* be *invariable*, which had not consequents *as invariable*, or, as if an *uni-*

form series were not merely another name for a number of *uniform antecedents and consequents*. A *cause* is, perhaps, not that which has merely *once* preceded an event; but we give the name to that which *has* always been followed by a certain event, *is* followed by a certain event, and, according to our belief, *will continue* to be in future followed by that event, as its immediate consequent; and causation, power, or any other synonymous words which we may use, express nothing more than this permanent relation of that which has preceded to that which has followed. If this invariableness of succession, *past, present, and future*, be not that which constitutes one event the *effect* of another, Dr Reid, at least, has not pointed out any additional circumstance which we must combine with it, in our definition of an *effect*, though he has shewn, indeed, with most abundant evidence, if any evidence at all were necessary, that the *antecedents* and *consequents* are not *the same;* that we use active and passive verbs, in different senses, applying, as might well be supposed, the one to the antecedent, the other to the consequent; that we speak of effects and causes as if truly different, since it is unquestionably not the same thing to *follow uniformly a certain change*, and to *precede uniformly a certain change*, and that we never think of giving those names where we do not conceive that there is some permanent relation. But, though these distinctions might be allowed to have irresistible weight, in opposition to the scepticism, *if* such extravagant scepticism there ever were, which affirmed the sequences of events to be altogether

casual and irregular, they are surely of no weight against that simple definition of power, which affirms it to consist in the probability of the *invariable sequence of some event as its immediate consequent;* since this very regularity of the sequences, which is supposed by the definition, must, of itself, have given occasion to *all* those distinctions of thought and language which Dr Reid has adduced.

That one event should invariably be followed by another event, is indeed, it will be allowed, as every thing in nature is, most wonderful, and can be ascribed only to the infinite source of every thing wonderful and sublime; the will of that divine Being, who gave the universe its laws, and who formed these with a most beneficent arrangement for the happiness of his creatures, who, without a belief in the uniformity of these laws, to direct their conduct, could not have known how to preserve even their animal existence. But the uniformity of succession is surely not rendered less wonderful, by a mere change of name. It is the same unaltered wonder still, when we ascribe the term *power* to the prior of two events, as when we ascribe to it the exactly synonymous phrase *invariableness of antecedence;* each of these terms implying nothing more than that the one event cannot take place without being immediately followed by the other. The *permanence and uniformity* of the relation are the essential circumstances. To be *that which cannot exist, without being instantly followed by a certain event,* is to be the *cause of the event,* as a correlative *effect.* It is impossible for us to believe, that the invariable antecedent is any thing

but the cause, or the cause any thing but the invariable antecedent; as it is impossible for us to believe that *homo* is the Latin synonime of *man*, and yet that *man* is not the English synonime of *homo*.

To know the *powers* of nature, is, then, nothing more than to know what antecedents *are* and *will* be *invariable*, followed by *what* consequents; for this invariableness, and not any distinct existence, is all which the shorter term power, in any case, expresses; and this, and this alone, is the true object of physical inquiry, in that second point of view, in which we have considered it, as directed to the *successions of events*.

Whenever, therefore, the question is put, as to any object, *What is it?* there are two answers, and *only two* answers, that can be given with meaning. We may regard it *as it exists in space*, and state the elements that co-exist in it, or rather that constitute it; or we may regard it, *as it exists in time*, and state, in all the series of changes, of which it forms an invariable part, the objects to which it is related as *antecedent* or *consequent*.

To combine these two views of nature, *as it exists in space and time*, and to know, with perfect accuracy, *every* element of *every* aggregate, and *every series of changes*, of which each forms, or can form, a part, would be to know *every thing which can be physically known of the universe*. To extend our mere physical inquiry still farther into the phenomena of nature, *after this perfect knowledge*, would be to suppose erroneously, that, in the compounds before us, of which we know every element,

there is some element, not yet discovered, or, in the well-known successions of events, some *antecedent* or *consequent* as yet unobserved; or it would be to inquire without any real object of inquiry,—a sort of investigation, which, for two thousand years, was almost the sole employment of the subtile and the studious, and which is far from having perished, with those venerable follies of the schools, at which we know so well how to smile, even while we are imitating them, perhaps, with similar errors of our own. I cannot but think, for example, that, on this very subject of the connexion of events, the prevalent notions and doctrines, even of very eminent philosophers, are not far advanced beyond the verbal complexity of the four causes of which Aristotle treats, the *material*, the *formal*, the *efficient*, and the *final*; or Plato's five causes, which Seneca, in one of his Epistles, briefly defines the *id ex quo*, the *id à quo*, the *id quo*, the *id ad quod*, and the *id propter quod*;* and though there were no other evidence than this one subject affords, it would still, I fear, prove sufficiently, that, with all our manifest improvements in our plans of philosophical investigation, and all the splendid discoveries to which these improvements have led, we have not *wholly* lost that great art, which, for so long a time, supplied the place of the whole art of philosophizing—the art of inquiring assiduously, without knowing what we are inquiring about.

It is an art, indeed, which, there is too much rea-

* Epist. 65.

son to suppose, will accompany philosophy, though always, it is to be hoped, in less and less proportion, during the whole course of its progress. There will for ever be points, on which those will reason ill, who may yet reason, with perfect accuracy, on other matters. With all those sublime discoveries of modern times, which do us so much honour, and with that improved art of discovery, which is still more valuable to us than the discoveries produced by it, we must not flatter ourselves with exemption from the errors of darker ages—of ages truly worthy of the name of *dark*, but to which we perhaps give the name, with more readiness, because it seems to imply, that our own is an age of light. Our real comfort, in comparing ourselves with the *irrefragable* and *subtile doctors* of other times, is not that we do not sometimes reason as indefatigably ill as they, and without knowing what we are truly reasoning about, but that we do this *much less frequently*, and are continually *lessening* the number of cases, in which we reason as ill, and increasing, in proportion, the number of cases, in which we reason better, and do truly know, what objects we are seeking.

Of all the cases, however, in which it is of importance, that the mind should have precise notions of its objects of inquiry, the most important are those which relate to the subject at present considered by us; because the nature of power, in the relation which it is impossible for us not to feel to events, as reciprocally effects and causes, must enter, in a great measure, into every inquiry which we are

capable of making, as to the successive phenomena, either of *matter* or of *mind*. It is of so much importance, therefore, to our future inquiries, that you should know what this *universal and paramount relation* is, that I have dwelt on it at a length, which I fear must have already exhausted your patience; since it is a discussion, I must confess, which requires considerable effort of attention; and which has nothing, I must also confess, to recommend it, *but* its dry utility. I trust, however, that you are too well acquainted with the nature of science, not to know, that it is its utility which is its *primary* recommendation; and that you are too desirous of advancing in it, not to disregard the occasional ruggedness of a road, which is far from being always rugged. It may be allowed to him, who walks only for the pleasure of the moment, to turn away from every path, in which he has not flowers and verdure beneath his feet, and beauty wherever he looks around. But what should we have thought of the competitor of the Olympic course, whose object was the glory of a prize, contested by the proudest of his contemporary heroes, if, with that illustrious reward before him,—with strength and agility that might ensure him the possession of it,—and with all the assembled multitudes of Greece to witness his triumph, he had turned away, from the contest, and the victory, because he was not to tread on softness, and to be refreshed with fragrance, as he moved along! In that knowledge which awaits your studies, in the various sciences to which your attention may be turned, *you* have a *much nobler prize* before

you; and, therefore, I shall not hesitate to call forth occasionally all the vigour of your attention, at the risk of a little temporary fatigue, as often as it shall appear to me, that, by exciting you to more than ordinary intellectual activity, I can facilitate your acquisition of a reward, which the listless exertions of the indolent never can obtain, and which is as truly the prize of strenuous effort, as the Palms of the Circus or the Course,

LECTURE VII.

ON POWER, CAUSE, AND EFFECT.

My last Lecture, Gentlemen, was chiefly employed in examining *what it is*, which is the real object of inquiry, when we consider the phenomena of nature as successive; and we found, that, by an original principle of our constitution, we are led, from the mere observation of change, to believe, that, when similar circumstances recur, the changes, which we observed, will also recur in the same order,—that there is hence conceived by us to be a permanent relation of one event, *as invariably antecedent*, to another event, *as invariably consequent*,—and that this *permanent relation* is all which constitutes *power*. It is a word, indeed, of much seeming mystery; but all which is supposed to be mysterious and perplexing in it vanishes, when it is regarded in its true light as only a short general term, expressive of *invariable antecedence*, or, in other words, of that, which cannot exist in certain circumstances, without being immediately followed by a certain definite event, which we denominate an *effect*, in reference to the antecedent, which we denominate a *cause*

To express, shortly, what appears to me to be the only intelligible meaning of the three most important words in physics, *immediate invariable antecedence*, is *power*,—the *immediate invariable antecedent*, in any sequence, is a *cause*,—the *immediate invariable consequent* is the correlative *effect*.

The *object of philosophic inquiry*, then, in that second department of it, which we considered, *with respect to the phenomena of nature as successive*, we have found not to be any thing different from the *phenomena themselves*, but to be those very phenomena, *as preceding or following*, in certain regular series. Power is not any thing that can exist separately from a substance, but is merely the substance itself, *considered in relation to another substance*,—in the same manner, as what we denominate *form*, is not any thing separate from the elementary atoms of a mass, but is merely the relation of a number of atoms, as *co-existing in apparent contact*. The sculptor, at every stroke of his chisel, alters the form of the block of marble on which he works, not by communicating to it any new qualities, but merely by separating from it a number of the corpuscles, which were formerly included by us, in our conception of the continuous whole; and when he has given the last delicate touches that finish the Jupiter, or the Venus, or Apollo, the divine form which we admire, as if it had assumed a new existence beneath the artist's hand, is still in itself *unaltered*,—the same quiescent mass, that slumbered for ages in the quarry of which it was a part.

Quale fuscæ marmor in Africæ
Solo recisum, sumere idoneum
Quoscunque vultus, seu Diana
Seu Cytheræa magis placebit:
Informis, ater, sub pedibus jacet,
Donec politus Phidiacâ manû
Formosa tandem destinatæ
Induitur lapis ora divæ.
Jam, jamque ponit duritiem placens,
Et nunc ocelli, et gratia mollium
Spirat genarum, nunc labella et
Per nivium coma sparsa collum.

The *form* of bodies is the relation of their elements to each other *in space*,—the *power* of bodies is their relation to each other *in time;* and *both form* and *power*, if considered *separately* from the number of elementary corpuscles, and from the changes that arise successively, are equally abstractions of the mind, and nothing more. In a former Lecture, I alluded to the influence of errors with respect to the nature of abstraction, as one of the principal causes that retard the progress of philosophy. We give a name to some common quality of many substances; and we then suppose, that there is in it something real, because we have given it a name, and strive to discover, what that is in itself, which, in itself, has no existence. The example, which I used at that time, was the very striking one, of the *genera*, and *species*, and the whole classes of *ascending* and *descending universals* of the schools. I might have found an example, as striking, in those abstractions of *form* and *power*, which we are now considering, —abstractions, that have exercised an influence on

philosophy, *as* injurious as the whole series of universals in Porphyry's memorable tree, and *one* of which, at least, still continues to exercise the same injurious influence, when the tree of Porphyry has been long disregarded, and almost forgotten.

In the philosophy of Aristotle, *form*, which all now readily allow to be a mere abstraction of the mind, when considered *separately* from the figured substance, was regarded as something equally *real* with *matter* itself; and, indeed, *matter*, which was supposed to derive from *form* all its qualities, was rather the less important of the two. Of *substantial forms*, however, long so omnipotent, we now hear, only in those works which record the errors of other ages, as a part of the history of the fallible being *man*, or in those higher works of playful ridicule, which convert our very follies into a source of amusement, and find abundant materials, therefore, in what was once the *wisdom* of the past. Crambé, the young companion of Martinus Scribblerus, we are told, "regretted extremely, that substantial forms, a race of harmless beings, which had lasted for many years, and afforded a comfortable subsistence to many poor philosophers, should be now hunted down like so many wolves, without the possibility of a retreat. He considered that it had gone much harder with *them*, than with *essences*, which had retired from the schools, into the apothecaries shops, where some of them had been advanced into the degree of quintessences. He thought there should be a retreat for poor *substantial forms* amongst the Gentlemen Ushers at Court, and that there *were* indeed *substantial forms*, such as *forms*

of Prayer and forms of Government, without which the things themselves could never long subsist."*

The subject of this pleasantry is, indeed, it must be owned, so *absurd in itself*, as scarcely to require the aid of *wit*, to render it *ridiculous*; and yet this more than poetic personification of the mere *figure* of a body, *as itself a separate unity*, which appears to *us* too absurd almost to be *feigned* as an object of philosophic belief, even to such a mind as that of Crambé, was what, for age after age, seemed to the most intelligent philosophers a complete explanation of all the wonders of the universe; and *substantial forms*, far from needing a retreat among Gentlemen Ushers, at Court, had their place of highest honours amid Doctors and Disputants, in every School and College, where, though they certainly could not give *science*, they at least served the temporary purpose of rendering the *want of it unfelt*, and of giving all the dignity which science itself could have bestowed.

The vague and obscure notions, at present attached to the words *power*, *cause*, *effect*, appear to me very analogous to the notions of the Peripatetics, and, indeed, of the greater number of the ancient philosophers, with respect to form; and, I trust, that as we have now universally learned to consider *form*, as nothing in itself, but only as the relation of bodies *co-existing immediately in space*, so *power* will at length be as universally considered as only the relation which substances bear to each other, *in time*, according as their phenomena are immediately

* Mart. Scrib. c. 7.—Pope's Works, *Ed.* 1757, v. vii. p. 58, 59.

successive; the *invariable antecedent* being the *cause*, the *invariable consequent* the *effect;* and the antecedent and consequent being all that are present in any phenomenon. There are, in nature, *only substances;* and *all the substances in nature*, are *every thing that truly exists in nature*. There is, therefore, no additional *power*, separate, or different from the antecedent itself, more than there is *form*, separate or different from the figured mass, or any other quality, without a substance. In the beautiful experiment of the prismatic decomposition of light, for example, the refracting power of the prism is not any thing separate or separable from it, more than its weight or *transparency* of *colour*. There are not a prism *and* transparency, but there is a prism giving passage to light. In like manner, there are not a prism, *and* refracting power, and coloured rays, but there are a prism and rays of various colours, which we have perceived to be deflected variously from their original line of direction, when they approach and quit the lens, and which, we believe, will, in the same circumstances, continually exhibit the same tendency.

It is the mere regularity of the successions of events, not any additional and more mysterious circumstance, which power may be supposed to denote, that gives the whole value to our physical knowledge. It is of importance for us to know, *what* antecedents truly precede *what* consequents; since we can thus provide for that future, which we are hence enabled to foresee, and can, in a great measure, *modify*, and almost *create*, the future to ourselves, by *arranging* the objects over which we have command,

in such a manner, as to form with them the *antecedents*, which we know to be invariably followed by the *consequents desired by us*. It is thus we are able to exercise that command over *nature*, which *He*, who is its only real Sovereign, has designed, in the magnificence of His bounty, to confer on us, together with the still greater privilege of knowing that Omnipotence to which all our delegated empire is so humbly subordinate. It is a command which can be exercised by us, only as beings, who, according to one of the definitions that have been given of man, *look both before and behind*; or, in the words of Cicero, who join and connect the future with the present, seeing things, not in their progress merely, but in the circumstances that precede them, and the circumstances that follow them, and being thus enabled to provide and arrange whatever is necessary for that life, of which the whole course lies open before us. "Homo autem (quod rationis est particeps, per quam consequentia cernit, causas rerum videt, earumque progressus et quasi antecessiones non ignorat, similitudines comparat, et rebus præsentibus adjungit atque annectit futuras) facile totiûs vitæ cursum videt, ad eamque degendam præparat res necessarias."*

That power is nothing more than the relation of one object or event as antecedent to another object or event, though *its immediate and invariable consequent*, may, perhaps, from the influence of former habits of thought, or rather, of former abuse of language, at first appear to you an unwarrantable sim-

* Cicero de Officiis, lib. i. c. 4.

plification; for, though you may never have clearly conceived, in power, any thing more than the immediate sequence of a certain change or event, as its uniform attendant, the mere habit of attaching to it, many phrases of mystery, may, very naturally, lead you to conceive, that, in itself, independently of these phrases, there must be something peculiarly mysterious. But the longer you attend to the notion, the more clearly will you perceive, that all which you have ever understood in it, is *the immediate sequence of some change* with *the certainty of the future recurrence of this effect*, as often as the antecedent itself may recur in similar circumstances. To take an example, which I have already repeatedly employed, when a spark falls upon gunpowder, and kindles it into explosion, every one ascribes to the spark the *power* of kindling the inflammable mass. But let any one ask himself, what it is which he means by the term, and, without contenting himself with a few phrases that signify nothing, *reflect*, before he give his answer, and he will find, that he means nothing more, than that, in all similar circumstances, the explosion of gunpowder will be the immediate and uniform consequence of the application of a spark. To take an example more immediately connected with our own science, we all know, that as soon as any one, in the usual circumstances of health and freedom, wills to move his arm, the motion of his arm follows; and we all believe, that, in the same circumstance of health, and in the same freedom from external restraint, the same *will* to move the arm, will be constantly followed by the same *motion*. If

we knew and believed nothing more, than that this motion of the arm would *uniformly follow* the will to move it, would our knowledge of this particular phenomenon be less perfect, than at present, and should we learn any thing *new*, by being told, that the will would *not merely* be *invariably followed* by the motion of the arm, but that the will would *also* have the *power of moving the arm;* or would not the power of moving the arm be precisely the same thing, as the invariable sequence of the motion of the arm, when the will was immediately antecedent?

This test of identity, as I have said in my Essay on the subject, appears to me to be a most accurate one. When a proposition is true, and yet communicates no additional information, it must be of exactly the same import, as some other proposition, formerly understood and admitted. Let us suppose ourselves, then, to know *all* the antecedents and consequents in nature, and to believe, not merely that they have *once* or *repeatedly* existed in succession, but that they have *uniformly* done so, and will continue *for ever* to recur in similar series, so that, but for the intervention of the Divine will, which would be itself, in that case, a new antecedent, it will be absolutely impossible for any one of the antecedents to exist *again*, in similar circumstances, without being instantly followed by its original consequent. If an *effect* be *something more* than what *invariably follows* a particular antecedent, we might, on the present supposition, know *every invariable consequent* of *every antecedent*, so as to be able to predict, in their minutest circumstance, *what* events would

for ever follow *every other* event, and yet have no conception of *power or causation.* We might know, that the flame of a candle, if we hold our hand over it, would be instantly *followed* by pain and burning of the hand,—that, if we ate or drank a certain quantity, our hunger and thirst would cease;—we might even build houses for shelter, sow and plant for sustenance, form legislative enactments for the prevention or punishment of vice, and bestow rewards for the encouragement of virtue;—in short, we might do, as *individuals* and *citizens,* whatever we do at this moment, *and with exactly the same views,* and yet, (on the supposition that power is something *different* from that invariable antecedence which alone we are supposed to know,) we might with all this unerring knowledge of the future, and undoubting confidence in the results which it was to present, have no *knowledge* of a single *power* in nature, or of a single *cause* or *effect.* To him who had previously kindled a fire, and placed on it a vessel full of water, with the certainty that the water, in that situation, would speedily become hot, what additional information would be given, by telling him that the fire had the *power* of boiling water, that it was the *cause* of the boiling, and the boiling its *effect?* And, if no additional information would in this case be given, then, according to the test of this identity of propositions, before stated, to know events *as invariably antecedent and consequent,* is to know them *as causes and effects;* and to know *all the powers of* every substance therefore, would be only to know *what* changes or

events would, in all possible circumstances, ensue, when preceded by certain other changes or events. It is only by confounding *casual* with *uniform and invariable* antecedence, that *power* can be conceived, to be something different from *antecedence*. It certainly is something very different from the priority of a single moment; but it is impossible to form any conception of it whatever, except merely as that which is *constantly followed* by a certain effect.

Such is the *simple*, and, as it appears to me, the *only* intelligible view of *power*, as discoverable in the successive phenomena of nature. And yet, how different from this simple view is the *common*, or, I may almost say, the *universal* notion of the agencies, which are supposed to be concerned in the phenomena that are the objects of philosophic inquiry. It is the detection of the *powers of nature*, to which such inquiry is supposed to lead,—but not of powers, in the sense in which alone that phrase is intelligible, as signifying the *objects themselves which uniformly precede certain changes*. The *powers* which our investigation is to detect, or which, at least, in all the phenomena that come under our observation, we are to consider as the sole efficient, though invisible producers of them, are conceived by us to be something far more mysterious,—something that is no part of the antecedent, and yet is a part of it,—or that intervenes between each antecedent and consequent, without being itself anything intermediate,—as if it were possible that anything could

intervene in a series, without instantly becoming itself a part of the series,—a new link in the lengthened chain,—the consequent of the former antecedent, and the antecedent of the former consequent.

To me, indeed, it appears so very obvious a truth, that *the substances which exist in nature*—the world, its living inhabitants, and the adorable Being who created them,—are *all the real existences in nature*, and that, in the various changes which occur, therefore, there can as little be any powers or susceptibilities different from the antecedents and consequents themselves, as there can be forms different from the co-existing particles which constitute them, —that to labour thus to impress this truth upon your minds, seems to me almost like an attempt to demonstrate a self-evident proposition. An illusion, however, so *universal*, as that which supposes the *powers* of nature, to be something more, than the *mere series of antecedents themselves*, is not rashly, or without very full inquiry, to be considered *as an illusion*; and, at any rate, in the case of a mistake, so prevalent and so important in its consequences, it cannot be uninteresting, to inquire into the circumstances, that appear most probably to have led to it. Indeed the more false, and the more obviously false the illusion is, the more must it deserve our inquiry, *what* those circumstances have been which have so long obtained for it the assent, not of common understanding *merely*, but of the quick-sighted and the subtile. For a full view of my opinions on this subject, I must refer you to the work which I have published on the Relation of

Cause and Effect; and the short abstract of them which I now offer, as it would be superfluous for those who have read and understood that work, is chiefly for the sake of those who may not have had an opportuuity of perusing the volume itself.

One source of the general fallacy unquestionably is that influence of *abstraction*, to which I before alluded, as *aided*, and in a great measure *perpetuated*, by the use of language, and the common unavoidable modes of grammatical construction. We speak of the powers *of* a substance, of substances that *have* certain power—of the figure of a body, or of bodies that have a certain figure, in the same manner as we speak of the students of a university, or of a house that has a great number of lodgers; and we thus learn to consider the power, *which a substance possesses*, as something different from *the substance itself*, inherent in it indeed, but inherent, *as something that may yet subsist separately*. In the ancient philosophy, this error *extended* to the notions *both* of *form* and power. In the case of *form*, however, we have seen, that the illusion, though it lasted for many ages, did at length cease, and that no one now regards the *figure* of a body, as anything but the body itself. It is probable that the illusion, with respect to *power*, as something different from the substance that is said to possess it, would, in like manner, have ceased, and given place to juster views, if it had not been for the cause, which I am next to consider.

This cause is *the imperfection of our senses*, the same cause which, in the other department of phy-

sics before examined by us,—the department, that relates to *matter considered merely as existing in space*,—we find to give occasion to all our inquiries into the compositions of bodies. In *this* department of physics, however, which relates to the *successions of phenomena in time*, the imperfection of our senses operates in a different way. It is not that which gives occasion to the *necessity* of inquiry; for we have seen, that senses, of the utmost accuracy and delicacy, could not, *of themselves*, and without experience, have enabled us to predict any one event, in the innumerable series of phenomena that are constantly taking place around us. But, though senses of the nicest discrimination could not have rendered inquiry into the successions of events superfluous, they would have saved us from much idle inquiry, and have given far greater precision, if not to our *rules*, at least to our uniform *practice*, of philosophizing.

As our senses are at present constituted, they are too imperfect, to enable us to distinguish all the elements, that co-exist in bodies, and of elements, which are themselves unknown to us, the minute changes which take place in them, must of course be unknown. We are hence, from our incapacity of discovering these elements by our imperfect senses, and imperfect analysis, incapable of distinguishing the *whole series* of external changes that occur in them, —the whole progressive series of antecedents and consequents in a phenomenon that appears to our senses simple; and, since it is only between *immediate* antecedents and consequents, that we suppose

any permanent and invariable relation, we are therefore constantly on the watch, to detect, in the more obvious changes that appear to us in nature, some of those *minuter elementary changes*, which we suspect to intervene. These minute invisible changes, when actually intervening, are truly what connect the obvious antecedents with the obvious consequents; and the innumerable discoveries, which we are constantly making of these, lead us habitually to suppose, that, amid *all* the visible changes perceived by us, there is *something latent which links them together*. He who for the first time listens to the delightful sounds of a violin, if he be ignorant of the theory of sound, will very naturally suppose that the touch of the strings by the bow is the cause of the melody which he hears. He learns, however, that this primary impulse would be of little effect, were it not for the *vibrations* excited by it in the violin itself; and another discovery, still more important, shews him that the vibration of the instrument would be of no effect, if it were not for the elastic medium, interposed, between his ear and it. It is no longer to the violin, therefore, that he looks, as the direct cause of the sensation of sound, but to the vibrating air; nor will even this be long considered by him as the *cause*, if he turns his attention to the structure of the organ of hearing. He will then trace effect after effect, through a long series of complex and very wonderful parts, till he arrive at the auditory nerve, and the whole mass of the brain, —in some unknown state of which he is at length forced to rest, as the *cause* or *immediate antecedent*,

of that affection of the mind, which constitutes the particular sensation. To inquire into the *latent causes* of events is thus to endeavour to observe changes which we suppose to be actually taking place before us unobserved, very nearly in the same manner, as to inquire into the *composition* of a substance is to strive to discover the bodies that are constantly before us, without our being able to distinguish them.

It is quite impossible, that this constant search, and frequent detection of *causes, before unknown,* thus found to intervene between all the phenomena observed by us, should not, by the influence of the common principles of our mental constitution, at length associate, almost indissolubly, with the very notion of *changes as perceived by us,* the notion of *something intermediate,* that *as yet* lies hid from our search, and *connects* the parts of the series which we at present perceive. This latent something, supposed to intervene between the observed antecedent and the observed consequent, being the *more immediate antecedent* of the change which we observe, is of course regarded by us as the *true cause* of the change, while the antecedent actually observed by us, and known, ceases, for the same reason, to be regarded *as* the cause, and a *cause* is hence supposed by us, to be something very mysterious; since we give the name, in our imagination, to something of the *nature* of which we *must* be absolutely ignorant, as we are, by supposition, ignorant of its very *existence.* The parts of a series of changes, which we truly observe, are regarded by us as little more than signs

of other intervening changes as yet undetected; and our thought is thus constantly turned from the *known* to the *unknown*, as often as we think of discovering a *cause*.

The expectation of discovering something *intermediate and unknown* between all known events, it thus appears, is very readily convertible into the common notion of power, as *a secret and invisible tie*. *Why does it do this?* or, *How does it produce this effect?* is the question which we are constantly disposed to put, when we are told of any change which one substance occasions in another; and the common answer, in all such cases, is nothing more than *the statement of some intervening object, or event, supposed to be unknown to the asker*, but as truly a *mere antecedent* in the sequence, as the more obvious *antecedent* which he is supposed to know. How is it that we see objects at a distance—a tower, for example, on the summit of a hill, on the opposite side of a river? Because rays of light are reflected from the tower to the eye. The *new antecedent* appears to us a very intelligible *reason*. And why do rays of light, that fall in confusion from every body, within our sphere of vision, on every point of the surface of the eye,—from the wood, the rock, the bridge, the river, as well as the tower,—give distinct impressions of all these different objects? Because the eye is formed of such refracting power, that the rays of light, which fall confusedly on its surface, converge within it, and form distinct images of the objects from which they come, on that part of the eye which is an expansion of the nerve of sight.

Again we are told *only of intervening events before unknown to us;* and again we consider *the mere knowledge of these new antecedents* as a very intelgible *explanation* of the event which we knew before. This constant statement of *something intermediate*, that is supposed to be unknown to us, as the cause of the phenomena which we perceive, whenever we ask, *how* or *why* they take place? continually strengthens the illusion, which leads us to regard the *powers of objects* as something different from the *perceived objects themselves;*—and yet it is evident, that to state *intervening* changes, is only to state *other* antecedents,—not any thing different from mere antecedence,—and that whatever number of these intervening changes we may discover between the antecedent and the consequent, which we at present know, we must at length come to some ultimate change, which is *truly and immediately antecedent* to the known effect. We may say, that an orator, when he declaims, excites the sensation of sound, *because the motion of his vocal organs excites vibrations in the intervening air*,—that these vibrations of air are the cause of the sound, *by communicating vibration to parts of the ear*,—and that the vibrations of these parts of the ear are the cause of the sound, *by affecting in a particular manner the nerve of hearing, and the brain in general;*—but, when we come to the *ultimate* affection of the sensorial organ, which *immediately* precedes the sensation of the mind, it is evident, that we cannot say of *it*, that it is the cause of the sound, *by* exciting any thing intermediate, since it then *could not* itself

be that by which the sound was immediately preceded. It is the cause, however; *exactly in the same manner as all the other parts of the sequence were causes, merely* by being the *immediate and invariable antecedent of the particular effect.* If, in our inability of assigning any thing intermediate, we were to say, that this last affection of the sensorial organ occasioned the sound, *because it had the power of occasioning sound,* we should say nothing more than if we said *at once,* that it *occasioned* the sound, or, in other words, was *that which could not exist in the same circumstances without the sound as its instant attendant.*

"What is there," says Malebranche, "which Aristotle cannot at once propose and resolve, by his fine words of *genus, species, act, power, nature, form, faculties, qualities, causa per se, causa per accidens?* His followers find it very difficult to comprehend that these words signify nothing; and that we are not more learned than we were before, when we have heard them tell us, in their best manner, that fire melts metals, because it has a solvent faculty; and that some unfortunate epicure, or glutton, digests ill, because he has a weak digestion, or because the *vis concoctrix* does not perform well its functions."*

We see only parts of the great sequences that are taking place in nature; and it is on this account we seek for the *causes of what we know* in the parts of the sequences that are *unknown.* If our senses had

* Recherche de la Verité, liv. iv. c. ii.—Vol. II. p. 322.

originally enabled us to discriminate *every element* of bodies, and, consequently, *all the minute changes which take place in these*, as clearly as the more obvious changes at present perceived by us; in short, if, between two known events, *we had never* DISCOVERED *any thing intermediate and unknown*, forming a new antecedent of the consequent observed before, our notion of a cause would have been very different from that *mysterious unintelligible something* which we now conceive it to be; and we should then, perhaps, have found as little difficulty in admitting it to be what it simply and truly is,—only another name for the *immediate invariable antecedent of any event*,—as we now find in admitting the *form* of a body, to be only another name for the *relative position* of the parts that constitute it.

But,—I have said in my Essay,—though the powers of *created things* be nothing more than their relation to certain events that invariably attend them, is this definition consistent with the notion which we form of the power of the Creator? or, Is not *his* efficiency altogether different *in nature*, as well as *in degree*? The omnipotence of God, it must, indeed, be allowed, bears to every created power the same relation of awful superiority, which his infinite wisdom and goodness bear to the humble knowledge and virtue of his creatures. But as we know his wisdom and goodness, only by knowing what that human wisdom and goodness are, which, with all their imperfection, he has yet permitted to know and adore him,—so, it is only by knowing created power, weak and limited as it is, that we can

rise to the contemplation of his omnipotence. In contemplating it, we consider only his *will*, as the direct *antecedent* of those glorious effects which the universe displays. The *power of God* is not any thing different from *God;* but is the Almighty himself, willing whatever seems to him good, and creating or altering all things by his very will to create or alter. It is enough for our devotion, to trace every where the characters of the Divinity,—of provident arrangement *prior* to this system of things,—and to know, therefore, that, *without that divine will as* ANTECEDENT, *nothing could have been.* Wherever we turn our eyes,—to the earth—to the heavens—to the myriads of beings that live and move around us—or to those more than myriads of worlds, which seem themselves almost like animated inhabitants of the infinity through which they range,—above us, beneath us, on every side, we discover, with a certainty that admits not of doubt, intelligence and design, that must have *preceded* the existence of every thing which exists. Yet, when we analyse those great, but obscure, ideas which rise in our mind, while we attempt to think of *the creation of things*, we feel, that it is still only a sequence of events which we are considering,—though of events, the magnitude of which allows us no comparison, because it has nothing in common with those earthly changes which fall beneath our view. We do not see any third circumstance existing intermediately, and binding, as it were, the will of the Omnipotent Creator to the things which are to be; we conceive only the *divine will itself*, as if made visible

to our imagination, and *all nature at the very moment rising around.* It is evident, that in the case of the divine agency, as well as in every other instance of causation, the introduction of any circumstance, as a bond of closer connection, would only furnish a new phenomenon to be itself connected; but even though it were possible to conceive the closer connection of such a third circumstance, as is supposed to constitute the inexplicable efficiency between the *will* of the Creator and the *rise of the universe*, it would *diminish*, indeed, but it certainly cannot be supposed to elevate, the majesty of the person, and of the scene. Our feeling of his omnipotence is not rendered stronger by the elevation of the complicated process; it is, on the contrary, the immediate succession of the object to the desire, which impresses the force of the omnipotence on our mind; and it is to the divine agency, therefore, that the representation of *instant sequence* seems peculiarly suited, as if it were *more emphatically powerful.* Such is the great charm of the celebrated passage of Genesis, descriptive of the creation of light. It is from stating nothing more than the antecedent and consequent, that the majestic simplicity of the description is derived. God *speaks*, and *it is done.* We imagine nothing intermediate. In our highest contemplation of His power, we believe only, that, when He *willed* creation, a world arose; and that, in all future time, His will to create cannot exist, without being *followed* by the instant rise into being of whatever He may *have* willed; that His will to destroy any thing, will be, in like manner, *followed* by

its *non-existence*; and His will to vary the course of things, by miraculous appearances. The will is the *only necessary previous change*; and that Being is *almighty power*, whose *every will* is immediately and *invariably* FOLLOWED by the existence of its objects.

LECTURE VIII.

ON HYPOTHESIS AND THEORY.

THE observations which I have already made on *power*, Gentlemen, have, I hope, shewn you, both what it *truly is*, and the sources of that *illusion*, which leads us to regard it as something *more mysterious*.

The principal source of this illusion, we found to be our *incapacity of distinguishing the minute elements of bodies*,—that leads us, in a manner, which it is unnecessary now to recapitulate, to suspect constantly some intermediate and unobserved objects and events, between the parts of sequences, which we truly observe, and, by the influence of this habit, to transfer, at least, the notion of power, from *the antecedent which we observe*, to *the supposed more direct antecedent, which we only imagine*, and to consider the *causes* of events as *some unknown circumstances*, that exist between all the antecedents which we know, and the consequents which we know, and connect these together in mysterious union.

The same imperfection of our senses, which, from our incapacity of discovering all the minute *elements*, and consequently all the minute elementary *changes*, in bodies, leads us to form erroneous notions of power and causation, has tended, in like manner, to produce a fondness for *hypotheses*, which, without rendering the observed phenomena, in any respect, *more intelligible*, only render them *more complicated*, and increase the very difficulty, which they are supposed to diminish.

Of this tendency of the mind, which is a very injurious one to the progress of sound philosophy, I must request your attention to a little fuller elucidation. To know well, *what hypotheses truly are in themselves*, and *what it is which they contribute to the explanation of phenomena*, is, I am convinced, the surest of all preservatives against that too ready assent, which you might otherwise be disposed to give to them; and to guard you, from the ready adoption of such loose conclusions, in the reasonings of others, and from the tendency to similar rashness of arrangement and inference, in your own speculative inquiries, is to perform for you the most important office that can be performed, for the regulation, both of your present studies, and of those maturer investigations, to which, I trust, your present studies are to lead.

I have also endeavoured to point out to you, in what manner we are led to believe, that we *explain* the sequence of two events, by stating some intermediate event. If asked, *How it is that we hear a voice at a distance, or see a distant object?* we im-

mediately answer, *Because the primary vibration of the organs of speech is propagated in successive vibrations through the intervening air*, and *because light is reflected or emitted from the distant object to the eye;* and he who hears this answer, which is obviously nothing more than the statement of *another* effect, or series of *effects*, that takes place before that particular effect, concerning which the question is put, is perfectly satisfied, for the time, with the acquisition which he has made, and thinks, that he *now knows, how it is*, that we *hear* and *see*. To know *why* a succession of events takes place, is thus at length conceived by us, to be the same thing, as to know *some other changes, or series of changes, which take place between them;* and, *with this opinion*, as to the necessary presence of some intervening and connecting link, it is very natural, that, when we can no longer state or imagine any thing which intervenes, we should feel as if the sequence itself were *less intelligible*, though unquestionably, when we can state some intervening circumstance, we have merely found a new antecedent in the train of physical events, so as to have now *two* antecedents and consequents, instead of *one* simple antecedent and consequent, and have thus only *doubled* our supposed mystery, instead of *removing* it.

Since it *does appear* to us, however, to remove the very mystery which it doubles, it is the same thing, with respect to our general practice of philosophizing, as if it *did* remove it. If we suppose the intervention of some unknown cause, in every phemenon which we perceive, we must be equally desi-

rous of discovering that unknown cause, which we *suppose* to be intermediate,—and, when this is not easily discoverable, we must feel a strong tendency to divine what it is, and to acquiesce, more readily than we should otherwise have done, in the certainty of what we have only imagined,—always, of course, imagining that cause, which seems to have most analogy to the observed effect.

Such is the nature of that illusion, from which the love of hypotheses flows,—as seeming, by the intervention of a new antecedent, to render more intelligible the sequences of *events* that are obviously before us,—though all which is truly done, is to double the number of antecedents; and, therefore, to double, instead of removing the difficulty, that is supposed to be involved in the consideration of a simple sequence of events. A stone tends to the ground—that it should have this *tendency*, in consequence of *the mere presence of the earth*, appears to us most wonderful; and we think, that it would be much less wonderful, if we could discover the presence, *though it were the mere presence*, of something else. We therefore, in our mind, run over *every circumstance analogous*, to discover something which we may consider as present, that may represent to our imagination the cause which we seek. The effect of *impulse*, in producing motion, we know by constant experience; and, as the motion, which it produces, in a particular direction, seems analogous to the motion of the stone in its particular direction, we conceive, that the motion of a stone, in

its fall to the earth, is rendered more intelligible, by the imagined intervention of some *impelling body*. The circumstances, which we observe, however, are manifestly inconsistent with the supposition of the impulse of any *very gross* matter. The analogies of gross matter are accordingly *excluded* from our thoughts, and we suppose the impulse to proceed from some *very subtle fluid*, to which we give the name of *ether*, or any other name, which we may chuse to invent for it. The hypothesis is founded, you will observe, on the mere analogy of another species of motion, and which would account for gravitation by the impulse of some fine fluid. It is evident, that there may be, in this way, *as many* hypotheses to explain a single fact, as there have been circumstances analogous observed in all the various phenomena of nature. Accordingly, another set of philosophers, instead of explaining gravitation by *the analogy of impulse*, have had recourse to *another analogy*, still more intimately familiar to us —that of the phenomena of life. We are able to move our limbs by our mere volition. The mind, therefore, it is evident, can produce motion in matter; and it is hence some interposed spiritual agent, which produces all the phenomena of gravitation. Every orb, in its revolution on its axis, or in its great journey through the heavens, has, according to this system of philosophical mythology, some peculiar *genius*, or *directing spirit*, that regulates its course, in the same manner as, of old, the universe itself was considered as one enormous animal, performing its various movements by its own vital en-

ergies. It is the influence of this analogy of our own *muscular motions*, as obedient to our volition,—together with the mistaken belief of adding *greater honour* to the divine Omnipotent,—which has led a very large class of philosophers to ascribe every change in the universe, material or intellectual, not to the original *foresight* and *arrangement* merely,—the irresistible evidence of which even the impiety, that professes to question it, *must* secretly admit,—but to the direct operation of the Creator and Sovereign of the world,—

> "The mighty Hand,
> That, ever busy, wheels the silent spheres,
> Works in the secret deep; shoots streaming thence
> The fair profusion that o'erspreads the spring;
> Flings from the sun direct the flaming day;
> Feeds every creature; hurls the tempest forth;
> And, as on earth this grateful change revolves,
> With transport touches all the springs of life."

So prone is the mind to complicate every phenomenon, by the insertion of imagined causes, in the simple sequences of physical events, that one hypothesis may often be said to involve in it many other hypotheses, invented for the explanation of that very phenomenon, which is adduced in explanation of another phenomenon, as simple as itself. The production of muscular motion by the will, which is the source of the hypothesis of direct spiritual agency, in every production of motion, or change, in the universe, has itself given occasion to innumerable spe-

culations of this kind. Indeed, on no subject has the imagination been more fruitful of fancies, that have been strangely given to the world under the name of philosophy. Though you cannot be supposed to be acquainted with the minute nomenclature of anatomy, you yet all know, that there are parts termed *muscles*, and other parts termed *nerves*, and that it is by the contraction of our muscles that our limbs are moved. The nerves, distributing to the different muscles, are evidently instrumental to their contraction; since the destruction of the nerve puts an end to the voluntary contraction of the muscle, and consequently to the apparent motion of the limb. But what is the influence that is propagated along the nerve, and in what manner is it propagated? For explaining this most familiar of all phenomena, there is scarcely any class of phenomena in nature, to the *analogy* of which recourse has not been had,—the vibration of musical chords,—the coiling or uncoiling of springs,—the motion of elastic fluids,—electricity, magnetism, galvanism;—and the result of so many hypotheses,—after all the labour of striving to adapt them to the phenomena, and the still greater labour of striving to prove them exactly adapted, when they were far from being so —has been the return to the *simple fact*, that *muscular motion follows a certain state of the nerve*;—in the same manner, as the result of all the similar labour, that has been employed *to account*, as it has been termed, for gravitation,—has been a return to the simple fact, that, at all visible distances

observed, the bodies in nature tend toward each other.

The mere sequence of one event after another event, is, however, *too easily conceived*, and has too little in it of that *complication*, which at once busies and delights us, to allow the *mind* to rest in it long. It must for ever have something to *disentangle*, and, therefore, something which is *perplexed*; for, such is the strange nature of man, that the simplicity of truth, which might seem to be its essential charm,—and which renders it doubly valuable, in relation to the weakness of his faculties,—is the very circumstance that renders it least attractive to him; and though, in his analysis of every thing that is compound in matter, or involved in thought, he constantly flatters himself, that it is this very simplicity, which he loves and seeks, he yet, when he arrives at *absolute simplicity*, feels an equal tendency to turn away from it, and gladly prefers to it any thing that is *more* mysterious, merely because it is mysterious. "I am persuaded," said one, who knew our nature well, "that, if the majority of mankind could be made to see the order of the universe, such as it is, as they would not remark in it any virtues attached to certain *numbers*, nor any properties inherent in certain planets, nor fatalities in certain times and revolutions of these, they would not be able to restrain themselves, on the sight of this admirable regularity and beauty, from crying out with astonishment, What, is this all?"

For the fidelity of this picture, in which Fonte-

nelle has so justly represented one of the common weaknesses of our intellectual nature, we unfortunately need not refer to the majority of mankind *alone*, to whom, it may be said, almost with equal truth, that everything is wonderful, and that nothing is wonderful. The feeling which it describes exists even in the most philosophic mind, and had certainly no increased influence even on that mind which described it so truly, when it employed all its great powers, in still striving to support the cumbrous system of the *Vortices*, against the simple theory of *attraction*. Even Newton himself, whose transcendent intellect was so well fitted to perceive the sublimity, which *simplification* adds to every thing that is *truly great in itself*, yet shewed, by his query with respect to the agency of ether, that he was not absolutely exempt from that human infirmity of which I speak; and though philosophers may *now* be considered as almost unanimous with respect to gravitation,—in considering it as the mere *tendency of bodies towards each other*, we yet, in admiring this tendency which we perceive, feel some reluctance to admit a *mere fact*, that presents itself so simply to our conception, and would be better pleased, if any other mode could be pointed out, by which, with some decent appearance of reason on its side, the same effect could seem to be brought about, by a natural apparatus, better suited to gratify our passion for the *complicated* and the *wonderful*. Though the theory of *Vortices* can scarcely be said *now* to have any lingering defender left,

there is a constant tendency, and a tendency which requires all our philosophy to repress it,—to relapse into the supposition of a great etherial fluid, by the immense *ocean*, or immense *streams*, of which the phenomenon now asserted to gravitate, may be explained, and we have no objection, to fill the whole boundless void of the universe, with an infinite profusion of this invisible matter, merely that we may think, with more comfort, *that we know how a feather falls to the ground*;—though the fall of the feather, after this magnificent cast of contrivance, would still be as truly inexplicable as at present; and though many other difficulties must, in that case, be admitted in addition. It is only in *geometry*, that we readily allow a straight line, to be the shortest that can be drawn between any two points. In the physics of mind, or of matter, we are far from allowing this. We prefer to it almost any *curve* that is presented to us by others,—and, without all doubt, any curve which we have described ourselves; and we boldly maintain, and, which is yet more, *fairly believe*, that we have found out a *shorter road*, merely because, in our philosophical peregrination, we have chosen to journey many miles about, and in our delight of gazing on new objects, have never thought of measuring the ground which we have trod.

I am aware, indeed, that, in the consideration of the simple antecedents and consequents which nature exhibits, it is not the mere complication of these, by the introduction of new intervening substances or events, which obtains from the mind so

ready an adoption of hypotheses. On the contrary, there is a sort of *false simplification* in the introduction of hypotheses, which itself aids the illusion of the mystery. I term the simplification *false*, because it is not in the phenomena themselves, but in our mode of conceiving them. It is certainly far more simple, *in nature*, that bodies should have a tendency toward each other, than that there should be oceans of a subtile fluid, circulating around them, in vortices,—or streams of such a fluid, projected continually on them from some unknown source, merely to produce the *same exact motions*, which would be the result of the reciprocal tendency in the bodies themselves. But the interposition of all this immensity of matter, *to account for the fall of a feather or rain-drop*, cumbrous as the contrivance must be allowed to be, is yet, in one respect, *more* simple to our conception, because, instead of two *classes* of phenomena, those of *gravitation* and of *impulse*, we have, in referring all to *impulse*, only *one* general class. Man loves what is *simple much*, but he loves what is *mysterious more*; and a mighty ocean of ether, operating invisibly in all the visible phenomena of the universe, has thus a sort of double charm, by uniting the *false simplification*, of which I have spoken, with abundance of *real mystery*. This mixture of the *simple* and the *mysterious*, is, in some measure, like the mixture of uniformity with diversity, that is so delightful in works of art. However pleasing objects may separately be, we are soon wearied with wandering over them, when, from their extreme irregularity, we cannot group them

in any distinct assemblage, or discover some slight relation of parts to the whole; and we are still sooner, and more painfully fatigued, when *every object which we see* is in exact symmetry with some other object. In like manner, the mind would be perplexed and oppressed, if it were to conceive *a great multitude* of objects or circumstances, concurring in the production of one observed event. But it feels a sort of dissatisfaction also, when the sequences of events which it observes, are reduced to the mere antecedents and consequents of which they consist, and *must* have a little more *complication* to flatter it with the belief, *that it has learned something which it is important to have learned.* To know that a withered leaf falls to the ground, is to know, what the very vulgar know, as well as ourselves; but *an ocean of ether, whirling it downward,* is something of which the vulgar have no conception, and gives a kind of mysterious magnificence to a very simple event, which makes us think, that our *knowledge* is greater, because we have given, in our imagination, a sort of cumbrous magnitude to the phenomenon itself.

That *hypotheses,* in that wide sense of the word which implies every thing conjectural, are without use in philosophy, it would be absurd to affirm, since every inquiry may, in that wide sense, be said to pre-suppose them, and *must always* pre-suppose them if the inquiry have any object. They are of use, however, not as *superseding* investigation, but as *directing* investigation to certain objects,—not as telling us, *what we are to believe,* but as pointing

out to us *what we are to endeavour to ascertain.* An hypothesis, in this view of it, is nothing more than a reason for making *one* experiment or observation rather than *another;* and it is evident, that, without some reason of this kind, as experiment and observations are almost infinite, inquiry would be altogether profitless. To make experiments, at random, is not to *philosophize;* it becomes philosophy, only when the experiments are made *with a certain view;* and to make them, with any particular view, is to suppose the presence of something, the operation of which they will tend either to prove or disprove. When Torricelli, for example, —proceeding on the observation previously made, by Galileo, with respect to the limited height to which water could be made to rise in a pump,—that memorable observation, which demonstrated, at last, after so many ages of errors, what ought not for a single moment to have required to be demonstrated; the absurdity of the horror of a void ascribed to nature—when, proceeding in this memorable observation, Torricelli made his equally memorable experiment with respect to the height of the column of mercury supported in an inverted tube, and found, on comparison of their specific gravities, the columns of *mercury* and *water* to be exactly equiponderant, it is evident that he was *led* to the experiment with the mercury by the *supposition,* that the rise of fluids *in vacuo* was occasioned by some counterpressure, exactly equal to the weight supported, and that the column of mercury, therefore, should be *less* in height than the column of water, in the exact in-

verse ratio of their specific gravities, *by which* the counterpressure was to be sustained. To conceive the air, which was then universally regarded as essentially *light*, to be not *light* but *heavy*, so as to press on the *fluid* beneath, was, at that time, to make as bold a *supposition* as *could* be made. It was, indeed, a temporary hypothesis, even when it led to that experimental demonstration of the fact, which proved it for ever after not to be *hypothetical*.

An hypothesis, then, in the first stage of inquiry, far from being *inconsistent* with sound philosophy, may be said to be *essential* to it. But it is essential *only in this first stage*, as suggesting what is afterwards to be verified or disproved; and, when the experiments or observations to which it directs us do not verify it, it is no longer to be entertained, *even as an hypothesis*. If we observe a phenomenon, which we never have observed before, it is absolutely impossible for us, *not* to think of the *analogous* cases which we may have seen; since they are suggested by a principal of association, which is as truly a part of our constitution, as the *senses* with which we perceived the phenomenon itself; and, if any of these analogies strike us as remarkably coincident, it is equally impossible for us not to *imagine*, that the cause, which we knew in that former instance, *may* also be present in this analogical instance, and that they *may*, therefore, both be reduced to the same class. To stop here, and, from this mere analogy, to infer positive identity of the causes, and to follow out the possible consequences, in innumerable applications, would be to do, as many great artists

in systematizing have done. What a philosopher, of sounder views, however, would do, in such a case, is very different. He would assume, indeed, as *possible*, or perhaps as *probable*, the existence of the supposed cause. But he would assume it, only to direct his examination of its reality, by investigating, as far as he was able, from past experience, what the circumstances would have been, in every respect, *if* the cause supposed had been actually present; and, even if these were all found to be exactly coincident, though he would think the presence of the cause *more probable*, he would be very far from considering it as *certain*, and would still endeavour to *lessen* the *chances* of fallacy, by watching the circumstances, should they again recur, and varying them, by experiment, in every possible way.

This patience and caution, however, essential as they are to just philosophizing, require, it must be confessed, no slight efforts of *self-denial*, but of a self-denial which is as necessary to *intellectual* excellence, as the various moral species of self-denial are to excellence and virtue.

"Mr Locke, I think," says Dr Reid, "mentions an eminent musician, who believed that God created the world in six days, and rested the seventh, because there are but seven notes in music. I myself," he continues, "knew one of that profession, who thought that there could be only three parts in harmony, to wit, bass, tenor, and treble; because there are but three persons in the Trinity." *

* On the Powers of the Human Mind, Essay vi. Chap. viii. Vol. II. p. 334. 8vo. *edit.*

The minds that could be satisfied with analogies so *very* slight, must, indeed, have been little acquainted with the principles of philosophic inquiry; and yet how many systems have been advanced in different ages, admired by multitudes, who knew them only by name, and still more revered by the philosophers, who gloried in adopting them, that have been founded on analogies almost as slight.

"The philosophers who form hypothetical systems of the universe, and of all its most secret laws," says Voltaire, in one of his lively similes, "are like our travellers that go to Constantinople, and think that they must tell us a great deal about the seraglio. They pretend to know every thing which passes within it—the whole secret history of the Sultan and his favourites, and they have seen nothing but its outside walls."

In one respect, however, philosophers, in their hypothetical systems, far outdo the travellers to Constantinople. They not merely tell us secrets of nature, which they have no opportunity of learning, but they believe the very tales of their own fancy. To see any unusual phenomenon, is, indeed, to *wonder at it*, at first; but to *explain* it, is almost the very next step, reason serving rather to defend the explanation, when it is made, than to assist greatly in making it; and, in many cases, each philosopher has his separate explanation, on which he is disposed to put as much reliance, as on the certainty of the fact itself, not abandoning the hypothesis, even though the fact should prove to have been different, but making it bend, with a happy pliability, to all

the diversities discovered, so as at last, perhaps, to account for circumstances the very reverse of those which it was originally invented to explain. "I have heard," says Condillac, "of a philosopher, who had the happiness of thinking that he had discovered a principle, which was to explain all the wonderful phenomena of chemistry; and who, in the ardour of his self-congratulation, hastened to communicate his discovery to a skilful chemist. The chemist had the kindness to listen to him, and then calmly told him, that there was but one unfortunate circumstance for his discovery, which was, that the chemical *facts* were exactly the reverse of what he had supposed. Well then, said the philosopher, have the goodness to tell me *what* they are, *that I may explain them by my system.*" * To those who know that *fondness for conjecture*, which may almost be said to be a sort of intellectual appetite, there is nothing in all the wonders which Swift tells us of his fabled Houynhnhms, that marks them more strongly as a different race from mankind, than the total absence of hypothesis from their systems of knowledge.

"I remember," says Gulliver, "it was with extreme difficulty that I could bring my master to understand the meaning of the word *opinion*, or how a point could be *disputable;* because reason taught us to affirm or deny *only when we are certain*; and beyond our knowledge we cannot do either. So that controversies, wranglings, disputes, and positiveness,

* Traité des Systêmes, chap. xii. Vol. II. p. 372.

in false or dubious propositions, are evils unknown among the Houynhnhms. In the like manner, when I used to explain to him our several systems of Natural Philosophy, he would laugh, that a creature pretending to reason, should value itself upon the knowledge of other people's conjectures, and in things, where that knowledge, if it were certain, could be of no use. Wherein he agreed entirely with the sentiments of Socrates, as Plato delivers them, which I mention as the highest honour I can do that Prince of philosophers. I have often since reflected what destruction such a doctrine would make in the libraries of Europe, and how many paths to fame would be then shut up in the learned world." *

While I wish to caution you against a fondness for hypotheses, by shewing you, not merely that they are *liable to error*,—for inquiry, *of every kind*, must be so in some degree,—but that, in truth, they leave the real difficulty of the succession of the observed consequents to the observed antecedents *as great as before*, and only add, to the supposed difficulty of explaining *one* sequence, the necessity of explaining a *sequence additional*,—I must remark, at the same time, that what is commonly termed *theory*, in opposition to *hypothesis*, is far from being *so* different from it as is commonly represented,—at least, in the very wide application which is usually made of it. We are told, by those who lay down rules of philosophizing, that the object of philosophy is, to ob-

* Travels, Part iv. chap. 8. Swift's Works, *edit.* Nichols, Vol. ix. p. 300.

serve particulars, and, from these, to frame *general laws*, which may, again, be applied to the explanation of particulars; and the view which is thus given of the real province of philosophy is undoubtedly a just one;—but there is an ambiguity in the language which may deceive you, and with respect to which, therefore, it is necessary for you to be on your guard. *If*, by the term *general law*, be meant the agreement in some common circumstances of a number of events observed, there can be no question that we proceed *safely* in framing it, and that what we have already found in *a number of events*, must be applicable *to that number of events;* in the same manner, as, after combining in the term *animal* the circumstances in which a *dog*, a *horse*, a *sheep* agree, we cannot err in applying the term *animal* to a *dog*, a *horse*, a *sheep*. But the only particular to which, in this case, we can, *with perfect confidence*, apply a *general law*, are *the very particulars* that have been before observed by us. If it be understood as *more* general than the circumstances observed, and, therefore, capable of being applied with perfect certainty to the explanation of new phenomena, we evidently, to the extent in which the general law is applied *beyond* the circumstances *observed*, proceed on *mere supposition*, as truly, as in any hypothesis which we could have framed; and though the supposition may be more and more certain, in proportion to the number of cases thus generalized, and the absence of any circumstance which can be supposed, in the new case, to be inconsistent with it, it never can amount to actual certainty. Let us take, for

example, one of the most striking cases of this sort. That bodies tend to each other, *in all circumstances*, with a force increasing directly as their quantities, and inversely as the squares of their distances, may seem in the highest degree probable indeed, from the innumerable facts observed on our globe, and in the magnificent extent of the planetary movements; but it cannot be said to be certain at all distances, in which we have never had an opportunity of making observations,—as it seems to be verified in the heights of our atmosphere, and in the distances of the planets, in their orbits, from the sun, and from each other. It is not necessary, however, to refer, for possible exceptions, to spaces that are beyond our observation; since, on the surface of our own earth, there is abundant evidence, that the law does *not* hold *universally*. Every quiescent mass that is capable of greater compression, and of which the particles, therefore, before that compression, are not in absolute contact, shews sufficiently, that the principle of attraction, which, of itself, would have brought them into actual contact, must have ceased to operate, while there was still a space between the particles that would have allowed its free operation; and, in the phenomena of *elasticity*, and *impulse in general*, it has not merely ceased, but is actually reversed,—the bodies which, at all visible distances, exhibited a reciprocal *attraction*, now exhibiting a reciprocal *repulsion*, in consequence of which they mutually fly off, as readily as they before approached,—that is to say, the tendency of bodies *to each*

other being converted into a tendency *from* each other, by a mere change of distance, so slight as to be almost inappreciable. When a ball rebounds from the earth, toward which it moved rapidly before, and the gravitating tendency is thus evidently reversed, without the intervention of any foreign force, what eye, though it be aided by all the nicest apparatus of optical art, can discover the lines which separate those infinitesimal differences of proximity, at which the particles of the ball still continue to gravitate toward the earth, and are afterwards driven *from* it in an opposite direction;—yet the phenomenon itself is a sufficient proof, that in these spaces, which seem, to our organs of sense, so completely the same, that it is absolutely impossible for us to distinguish them, the reciprocal tendencies of the particles of the ball and of the earth are as truly opposite, as if the laws of gravitation had, at the moment at which the rebound begins, been reversed through the whole system of the universe.

It is, indeed, scarcely possible to imagine a more striking proof of the danger of extending, with too great certainty, a general law, than this instant conversion of *attraction* into *repulsion*, without the addition of any new bodies, without any change in the nature of the bodies themselves, and a change of their circumstances so very slight, as to be absolutely indistinguishable, but for the opposite motions that result from it, with a change of their circumstances. After observing the gravity of bodies, at all heights of our atmosphere, and extending our survey through the wide spaces of our solar

system,—computing the tendency of the planets to the sun, and their disturbing forces, as they operate on each other,—and finding the resulting motions exactly to correspond with those which we had predicted by theory;—in these circumstances, after an examination so extensive, if we had affirmed, *as an universal law of matter*, that, at all distances, bodies tend toward each other, we should have considered the wideness of the induction, as justifying the affirmation; and yet, even in this case, we find, on the surface of our earth, in the mutual shocks of bodies, *and in their very rest*, sufficient evidence, that, in making the universal affirmation, we should have reasoned falsely. There is no theory, then, which, if applied to the *explanation* of *new* phenomena, is not, to a certain degree, conjectural; because it must proceed on the supposition, that what was true in certain circumstances, is true also in circumstances that have not been observed. It admits of certainty, only when it is applied to *the very substances observed—in the very circumstances observed*,—in which case, it may be strictly said to be nothing more than the application of a general *term* to the particulars, which we have before agreed to comprehend in it. Whatever is more than this is truly *hypothetical*,—the difference being, that we commonly give the name of *hypothesis* to cases, in which we suppose the intervention of some *substance*, of the existence of which, as present in the phenomenon, we have no direct proof, or of some additional quality of a substance before unobserved,—

and the name of *theory* to cases, which do not suppose the existence of any substance, that is not actually observed, or of any *quality* that has not been actually observed, but merely the continuance, in certain *new* circumstances, of tendencies observed in other circumstances. Thus, if a planet were discovered revolving in the space which separates the orbits of any two planets at present known, were we to suppose of matter, in this new situation, that it would be subject to the *same exact law of gravitation*, to which the other planets were known to be subject, and to predict its place in the heavens, at any time, according to this law, we should be said to form a theory of its motions; as we should not take for granted, any new quality of a substance, or the existence of any substance, which was not evidently present, but only of *tendencies* observed before in other circumstances,—analogous indeed, but not absolutely the same. We should be said to form an *hypothesis* on the subject, if, making the same prediction, as to its motions, and place in the heavens, at any given time, we were to ascribe the centripetal tendency, which confines it within its orbit, to the impulse of ether, or to any other mechanical cause. The terms, however, I must confess, though the distinction which I have now stated would be, in all cases, a very convenient one, are used very loosely, not in conversation merely, but in the writings of philosophers,—an *hypothesis* often meaning nothing more than a *theory*, to which we have *not* given our assent,—and a *theory*, *an hypothesis* which we have

adopted, or still more, *one* which we have formed ourselves.

A *theory*, then, even in that best sense, to which I wish it accurately confined, as often as it ventures *a single hair-breadth* beyond the line of former observation, *may* be wrong, as an *hypothesis* may be wrong. But, in a *theory*, in this sense of it, there are both less risk of error, and less extensive evil from error, than in an hypothesis. There is less risk of error, because we speak only of the properties of bodies, *that must be allowed actually to exist;* and the evil of error is, for the same reason, *less extensive*, since it must be confined to this single point; whereas, if we were to imagine falsely the presence of some third substance, our supposition might involve as many errors, as that substance has qualities; since we should be led to suppose, and expect, some or all of the *other* consequences, which usually attend it, when really present.

The practical conclusion to be drawn from all this *very long* discussion, is, that we should use hypotheses to *suggest* and *direct* inquiry, not to *terminate* or *supersede* it; and that, in *theorizing*,—as the chance of error, in the application of a *general law*, diminishes, in proportion to the number of analogous cases, in which it is observed to hold,—we should not form any *general proposition*, till after as wide an induction, as it is *possible* for us to make; and, in the subsequent application of it to particulars, should never content ourselves, in any

new circumstances, with the mere probability, however high, which this application of it affords; while it is possible for us to verify, or disprove it, *by actual experiment.*

LECTURE IX.

RECAPITULATION OF THE FOUR PRECEDING LECTURES; AND APPLICATION OF THE LAWS OF PHYSICAL INQUIRY TO THE STUDY OF MIND, COMMENCED.

For several Lectures, Gentlemen, we have been employed in considering the objects that are to be had in view, in Physical Inquiry in general, a clear conception of which seems to me as essential to the Philosophy of Mind, as to the Philosophy of Matter. I should now proceed to apply these general remarks more particularly to *our own science*; but, before doing this, it may be of advantage to retrace slightly our steps in the progress already made.

All inquiry, with respect to the various substances in nature, we have seen, must regard them *as they exist in space*, or *as they exist in time*,—the inquiry, in the one case, being into their *composition*; the inquiry, in the other case, into the changes which they exhibit. The first of these views we found to be very simple, having, for its object, only the discovery of *what is actually before us at the moment*,

—which, therefore, if we had been endowed with senses of greater delicacy and acuteness, we might have known, without any inquiry whatever. It is the investigation of the elements, or separate bodies, that exist together, in the substances which we considered, or rather that *constitute* the substances which we considered, by occupying the space which we assign to the one *imaginary* aggregate, and are regarded by us as *one* substance,—not from any absolute unity which they have in nature, since the elementary atoms, however continuous or near, have an existence as truly separate and independent, as if they had been created at the distance of worlds,—but from a unity, that is relative only to our *incapacity* of distinguishing them as separate. It is to the imperfection of our senses, then, that this first division of Physical Inquiry owes its origin; and its most complete results could enable us to discover only, *what has been before our eyes from the moment of our birth.*

The *second* division of inquiry,—that which relates to *the successions of phenomena in time*,—we found, however, to have a different origin; since the utmost perfection of our mere senses could show us only what *is*, at the moment of perception, not what *has been*, nor what *will be*; and there is nothing, in any qualities of bodies perceived by us, which, without experience, could enable us to predict the changes that are to occur in them. The foundation of all inquiry, *with respect to phenomena as successive*, we found to be that most important law, or original *tendency*, of our nature, in consequence of

which, we not merely *perceive* the changes exhibited to us at one particular moment, but, from this perception, are led irresistibly to believe, that similar changes *have* constantly taken place, in all similar circumstances, and *will* constantly take place, as often as the future circumstances shall be exactly similar to the present. We hence consider events, not as *casually* antecedent and consequent, but as *invariably* antecedent and consequent,—or, in other words, as *causes* and *effects*; and we give the name of *power* to this permanent *relation* of the invariable antecedent to its invariable consequent. The *powers* of substances, then, concerning which so many vague, and confused, and mysterious notions prevail, are only another name for the substances *themselves, in relation to other substances,*—not any thing *separate* from them and intermediate,—as the *form* of a body, concerning which too, for many ages, notions as vague and mysterious prevailed, is not any thing *different* from the body, but is only the body itself, considered according to the relative position of its elements. Form is the relation of immediate proximity, which bodies bear to each other *in space*;—power is the relation of immediate and uniform *proximity*, which events bear to each other *in time*; and the relation, far *from being different*, as is commonly supposed, when applied to matter and to spirit, is *precisely the same in kind*, whether the events, of which we think, be material or immaterial. It is of invariable antecedence that we speak alike in both cases, and of invariable antecedence only. When we say, that a magnet has the

power of attracting iron, we mean only, that a magnet cannot be brought near iron, without the instant motion of the iron towards it. When we say, in treating of *mental* influence, that man, in the ordinary circumstances of health, and when free from any foreign restraint, has the power of moving his hand, we mean only, that, in these circumstances, he cannot will to move his hand, without its consequent motion. When we speak of the omnipotence of the Supreme of Beings,—who is the fountain of all power, as he is the fountain of all existence,—we mean only, that the universe arose at *his command*, as its *instant consequence*, and that whatever he *wills* to exist or perish, *exists*, or is no more.

This simple view of *power*, as the mere antecedent substance itself, in its relation to its immediate and invariable consequences, without the intervention of any mysterious tie,—since there surely can be nothing in nature, *but all* the *substances* which exist in nature,—it was necessary to illustrate, at great length, in consequence of the very false notions, that are *generally*, or, I may say, *universally* prevalent on the subject. The illustration, I am aware, *must*, to many of you, have appeared *very* tedious, and a sufficient exemplification of that licence of exhausting occasionally your *attention*, and perhaps, too, your *patience*, of which I claimed the right of exercise, whenever it should appear to me necessary, to make any important, but abstract, truth familiar to your mind. I shall not regret, however, any temporary feeling of weariness which I may have occasioned, by dwelling on this great fundamental

subject, *if* I have succeeded in making familiar to your minds, the truths which I wished to impress on them, and have freed you from those false notions of occult and unintelligible agency in causes,—as something different from the mere causes or antecedents themselves,—which appear to me to have retarded, in a very singular degree, the progress of philosophy, —not merely, by habituating the mind to acquiesce in the use of language, to which it truly affixes no meaning, though even this evil is one of very serious injury in its general effects,—but by *misdirecting* its inquiries, and leading it, from the simplicity of nature,—in which every glance is truth, and every step is progress,—to bewilder itself, with the verbal mysteries of the schools, where there is no refreshment of truth to the eye, that is wearied with wandering only from shadow to shadow,—and where there is all the fatigue of continual progress, without the advance of a single step.

Even those philosophers, who have had the wisdom to perceive, that man can never *discover* any thing in the phenomena of nature, but a succession of events, that follow each other in regular series,—and who, accordingly, recommend the observation and arrangement of these regular *antecedents* and *consequents*, as the only attainable objects of philosophy, yet found this very advice, on the distinction of what they have termed *efficient causes*, as different from the *physical causes*, or simple *antecedents*, to which they advise us to devote our whole attention. There are certain *secret causes*, they say,

continually operating in the *production* of *every change which we observe*, and causes which alone deserve the name of *efficient*; but they are, at the same time, careful to tell us, that, although these *causes* are constantly operating before us, and are all which are *truly* acting before us, we must not hope, that we shall ever be able to detect one of them; and indeed, the prohibition of every attempt to discover the efficient causes of phenomena,—repeated in endless varieties of *precept* or *reproof*,—is the foundation of all their rules of philosophizing; as if the very information,—that what we are to consider *exclusively*, in the phenomena of nature, is far less important, than what we are studiously to omit,—were not, of itself, more powerful, in stimulating our curiosity to attempt the forbidden search, than any prohibition could be in repressing it. "Felix qui potuit rerum cognoscere causas." This will for ever be the feeling of the inquirer, *while* he thinks that there *are* any causes, more than those, which he has already investigated. Even Newton himself, that *sagest* of observers and reasoners, who could say, with the simplicity of pure philosophy, "*Hypotheses non fingo*," yet showed, as we have seen, by one of the most hypothetical of his Queries, that he was not exempt from the error which he wished to discourage—that inordinate love of the *unknown*, which must always lead those, who believe that there is something *intermediate* and *undiscovered* truly *existing* between events, to feel the anxious dissatisfaction of *incomplete inquiry*, in considering the

mere antecedents and consequents which nature exhibits, and to turn, therefore, as if for comfort, to any third circumstance, which can be introduced, without obvious absurdity, as a sort of connecting link, between the pairs of events. To suppose, that the mind should *not* have this disposition, would, indeed, be to suppose it void of that *principle of curiosity*, without which there can be no inquiry of any kind. He who could believe, that, between all the visible phenomena, there are *certain invisible agencies* continually operating, which have as real an existence as all that he perceives, and could yet content himself with numbering the visible phenomena, and giving them names, without any endeavour to discover the *intervening powers*, by which he is constantly surrounded, or at least to form some slight *guess*, as to that universal machinery, by which he conceived all the wonders of nature to be wrought, must be a being as different from the common intellectual beings of this earth, as the perfect sage of the Stoics from the frail creatures, of mingled vice and virtue, that *live* and *err* around us. That, in considering the phenomena of nature, we should confine our attention to the mere antecedents and consequents, which succeed each other in regular series, is unquestionably the soundest advice that can be given. But it is sound advice, for this reason more than any other, *that the regular series is, in truth, all that constitutes the phenomena*, and that to search for any thing more, is not to have an unattainable object in view, but to have no conceivable object whatever. *Then only* can the inquirer be

expected to content himself with observing and classing the sequences, which nature presents to us spontaneously, or in obedience to our art, when he is convinced, that all the substances which exist in the universe—God and the things which he has created —*are* every thing which truly exists in the universe, to which nothing can be added, which is not itself a *new substance;* that there can be nothing in the events of nature, therefore, *but* the antecedents and consequents which are present in them; and that these, accordingly, *or nothing*, are the very causes and effects, which he is desirous of investigating.

After this examination of the notions connected with the uniform successions of events, our attention was next turned to the nature and origin of *hypothetical inquiry*, which we found reason to ascribe to *the imperfection of our senses*, that renders it impossible for us to know whether we have observed the whole train of sequences in any phenomenon, from our inability to distinguish the various elements that may be the subjects of minute changes unobserved.

We are hence eager to supply, by a little guess-work of fancy, the parts unobserved, and suppose deficiencies in our observation where there may truly have been none; till at length, by this habitual process, every phenomenon becomes, to our imagination, the sign of something *intermediate* as its cause, the discovery of which is to be an explanation of the phenomenon. The mere succession of one event to another appears, to us, very difficult to be conceived, because it wants that intervening something, which

we have learned to consider as a *cause*;—but there seems to be no longer *any mystery, if* we can only suppose something intervening between them, and can thus succeed in doubling the difficulty, which we flatter ourselves with having removed; since, by the insertion of another link, we must now have two sequences of events instead of one simple sequence. This tendency of the imagination to form and rest on hypotheses,—or, in other words, to suppose substances present and operating, of the existence of which we have no direct proof,—we found to be one great source of error in our practice of philosophizing.

Another source of error we found to be the *too great extension* of what are termed general laws; which, though a less error in itself, is yet, in one respect, more dangerous than the former; because it is the error of better understandings,—of understandings that would not readily fall into the extravagant follies of hypotheses, but acknowledge the essential importance of *induction*, and think they are proceeding on it without the slightest deviation, almost at the very moment when they are abandoning it for conjecture. To observe the regular series of antecedents and consequents, and to class these as similar or dissimilar, are all which philosophers can do with complete certainty. But there is a constant tendency in the mind, to convert a *general* law into an *universal* law,—to suppose, after a wide induction, that what is true of many substances that have a very striking analogy, is *as certainly* true *of all* that have this striking analogy,—and that what is

true of them *in certain circumstances*, is true of them *in all circumstances*,—or, at least, in all circumstances which are not remarkably different. The widest induction which we can make, however, is still limited in its nature; and, though we may have observed substances in *many* situations, *there may be some new situations*, in which the event may be *different*, or even, perhaps, the very *reverse* of that which we should have predicted, by reasoning from the mere analogy of other circumstances. It appeared to me necessary, therefore, in consequence of the very ambiguous manner in which writers on this higher branch of logic speak of reasoning from general laws to particulars, to warn you, that the application to particulars can be made *with certainty*, only to the *very particulars* before observed and generalized,—and that, however analogous other particulars may seem, the application of the general law to *them* admits only of *probability*, which may, indeed, as the induction has been wider, and the circumstances of observed analogy more numerous, approach more or less to *certainty*, but must always be short of it, even in its nearest approximation.

Such, then, is *physical inquiry*, both as to its *objects*, and its *mode of procedure*, particularly as it regards the *universe without;* and the laws which regulate our inquiry in the internal world of thought are, in every respect, similar. The *same* great objects are to be had in view, and no other,—the *analysis of what is complex*, and the observation and

arrangement of the *sequences of phenomena*, as respectively *antecedent* and *consequent*.

In this respect, also, I may remark, the philosophy of matter and the philosophy of mind completely agree—that, *in both equally*, our knowledge is confined to the *phenomena which they exhibit*. We give the name of *matter* to the unknown cause of various feelings, which, by the constitution of our nature, it is impossible for us not to refer to *something external* as their *cause*. What it is, independent of our perception, we know not; but, as the subject of our perception, we regard it as that which is *extended*, and consequently *divisible*, *impenetrable*, *mobile*; and these qualities, or whatever other qualities we may think necessary to include for expressing the particular substances that affect our senses variously, constitute our whole *definition* of matter, because, in truth, they constitute our whole knowledge of it. To suppose us to know *what it is in itself*, in absolute independence of our *perception*, would be manifestly absurd; since it is only *by our perception*,—that is to say, by the *feelings of our mind*,—that it can be known to us at all; and these mere feelings of the mind must depend, at least, as much on the laws of *the mind affected*, as on the laws of the *substance that affects it*. Whatever knowledge we may acquire of it, therefore, is *relative* only, and *must* be relative, in all circumstances; though, instead of the few senses which connect us with it at present, we were endowed with as many senses as there are, perhaps, qualities of matter, the

nature of which we are at present incapable of distinguishing;—the only effect of such increased number of senses being, to render *more* qualities of matter known to us, not to make *matter* known to us in its very essence, as it exists without relation to mind.

"Tell me," says Micromegas, an inhabitant of one of the planets of the Dog Star, to the secretary of the Academy of Sciences, in the planet Saturn, at which he had recently arrived in a journey through the heavens,—"Tell me, how many senses have the men on your globe?"—I quote, as perhaps the name has already informed you, from an ingenious philosophic romance of Voltaire, who, from various allusions in the work, has evidently had Fontenelle, the illustrious secretary of the French Academy of Sciences, in view, in the picture which he gives of the Saturnian secretary.—"We have seventy-two senses," answered the academician, "and we are, every day, complaining of the smallness of the number. Our imagination goes far beyond our wants. What are seventy-two senses! and how pitiful a boundary, even for beings with such limited perceptions, to be cooped up within our ring, and our five moons! In spite of our curiosity, and in spite of as many passions as can result from six dozen of senses, we find our hours hang very heavily on our hands, and can always find time enough for yawning."—"I can very well believe it," says Micromegas, "for, in our globe, we have very near *one thousand* senses; and yet, with all these, we feel continually a sort of listless inquietude and vague desire, which are for

ever telling us that we *are nothing*, and that there are beings infinitely nearer perfection. I have travelled a good deal in the universe. I have seen many classes of mortals far beneath us, and many as much superior; but I have never had the good fortune to find any, who had not always more desires than real necessities to occupy their life.—And, pray, how long may you Saturnians live, with your few senses?" continued the Sirian.—"Ah! but a very short time, indeed!" said the little man of Saturn, with a sigh.—"It is the same with us," said the traveller; "we are for ever complaining of the shortness of life. It must be an universal law of nature."—"Alas!" said the Saturnian, "we live only five hundred great revolutions of the sun, (which is pretty much about fifteen thousand years of our counting.) You see well, that this is to die almost the moment one is born. Our existence is a point—our duration an instant—our globe an atom. Scarcely have we begun to pick up a little knowledge, when death rushes in upon us, before we can have acquired any thing like experience. As for me, I cannot venture even to think of any project. I feel myself but like a drop of water in the ocean; and, especially *now*, when I look to *you* and to *myself*, I really feel quite ashamed of the ridiculous appearance which I make in the universe."

"If I did not know that you were a philosopher," replied Micromegas, "I should be afraid of distressing you, when I tell you, that our life is seven hundred times longer than yours.—But what is even that? and, when we come to the last moment, to

have lived *a single day*, and to have lived *a whole eternity*, amount to the very same thing. I have been in countries where they live a thousand times longer than with us; and I have always found them murmuring, just as we do ourselves.—But you have seventy-two senses, and they must have told you something about your globe. How many properties has matter with you?"—"If you mean *essential* properties," said the Saturnian, "without which our globe could not subsist, we count three hundred, extensive, impenetrable, mobile, gravitation, divisibility, and so forth."—"That small number," replied the gigantic traveller, "may be sufficient for the views which the Creator must have had with respect to your narrow habitation. Your globe is little; its inhabitants are so too. You have *few senses*; your matter has *few qualities*. In all this, Providence has suited you most happily to each other."

"The academician was more and more astonished with every thing which the traveller told him. At length, after communicating to each other a little of what they knew, and a great deal of what they knew *not*, and reasoning, as well and as ill, as philosophers usually do, they resolved to set out together, on a little tour of the universe."*

That, with the one thousand senses of the Sirian, or even the seventy-two senses of the inhabitant of Saturn, our notions of matter would be very different from what they are at present, cannot be doubted; since we should assign to it qualities, correspond-

* Voltaire Œuvres, tom. xiv, p. 99—101. *4to. Edit. of* 1771.

ing with all the varieties of our six dozen or one thousand classes of sensations. But, even *with* all these sensations, it is evident, that we should still know as little of *matter, independent of the phenomena* which it exhibits *in relation to us*, as we know, at this moment. Our definition of it would comprehend more phenomena; but it would still be a definition of its phenomena only. We might perhaps be able to fill up the Saturnian catalogue of three hundred essential properties, but these would be still only the relations of matter to our own perception. A change in the mere susceptibility of our *organs of sense*, or of our *sentient mind*, would be *relatively to us*, like a change in the whole system of things, communicating, as it were, *new properties* to every object around us. A single sense additional, in *man*, might thus be to *external nature*, like the creation of the sun, when he first burst upon it in splendour, "like the god of the new world," and pouring everywhere *his own* effulgency, seemed to shed on it the very beauties which he only revealed.

If our knowledge of *matter* be *relative* only, our knowledge of *mind* is *equally so*. We know it only as susceptible of feelings that have already existed, and its susceptibilities of feelings which have not arisen, but which may, in other circumstances, arise, we know as little, as the blind can be supposed to know of colours, or as we, with all our senses, know of the qualities which matter *might* exhibit to us, if our own organization were different. Of the *essence* of mind, then, we know nothing, but in relation to the states or feelings that form, or have formed, our momen-

tary consciousness. Our knowledge is not *absolute* but *relative;* though, I must confess, that the term *relative* is applied, in an unusual manner, when, as in the present instance, the *relative* and *correlative* are *the same.* It is unquestionably the same individual mind, which, in intellectual investigation, is at once the *object* and the *observer.* But the noble endowment of memory, with which our Creator has blessed us, solves all the mystery of this singular paradox. In consequence of this one faculty, our mind, simple and indivisible as it truly is, is, as it were, multiplied and extended, expanding itself over that long series of sensations and emotions, in which it seems to live again, and to live with many lives. But for memory, there can be no question that the relation of thought to thought could not have been perceived; and that hence there could have been no philosophy whatever, intellectual or moral, physical or metaphysical. To this wonderful endowment, then, which gives us the past to compare with the present, we owe that most wonderful of relations, of which the *same* being is at once the *object* and the *subject,* contemplating itself, in the same manner, as it casts its view on objects that are distant from it, comparing thought with thought, emotion with emotion, approving its own moral actions, with the complacency with which it looks on the virtues of those whom it admires and loves, in the most remote nation or age, or passing sentence on itself, as if on a wretch whom it loathed, that was trembling with conscious delinquency, under the inquisition of a severe and all-knowing judge.

The *past* feelings of the mind, then, are, as it were, *objects present to the mind itself*, and acquire, thus truly, a sort of *relative existence*, which enables us to class the phenomena of our own spiritual being as we class the phenomena of the world without. The *mind* is that which we know to have been susceptible of all the variety of feelings which we remember; and it is only *as* it is susceptible of all these varieties of feeling, that we can have any knowledge of it. We define it, therefore, by stating *its various susceptibilities*, including more or fewer of these, in our definition, as we may either have *observed* or *remembered more or less*, or generalized more or less what we have observed and remembered; precisely as, in our definition of matter, we include more or fewer qualities, according to the extent of our previous observation and arrangement.

That we know *matter*, only as relative to our own susceptibility of being affected by it, does not lessen the value of the knowledge of it, which we are able to acquire; and, indeed, it is only *as it is capable of affecting us*, that the knowledge of it can be of any direct and immediate utility. It would, indeed, be the very absurdity of contradiction, to *suppose* ourselves *acquainted* with qualities *which cannot affect us*. But, even though this were possible, how profitless would the knowledge be, compared with the knowledge of the qualities which *are* capable of affecting us; like the knowledge of the seasons of the planet Saturn, or of the planets that have the Dog Star for their sun, compared with the more important knowledge of the seasons of *our own*

globe, by which we have the comfort of anticipating, in the labours of spring, the abundance of autumn, and gather in autumn the fruits, which, as products of vernal labour, are truly *fruits of the spring*.

To know *matter*, even *relatively*, as our *limited senses* allow us to know it, is to have knowledge which can scarcely be called *limited*. Nothing, indeed, can seem more narrow in extent, if we think only of the small number of our *senses*, by which alone the communication can be carried on. But what infinity of objects has nature presented to *each*! In the mere forms and colours that strike our eyes, what splendid variety! the proportion of all things, that bloom or live, the earth, the ocean, the universe, and almost God himself appearing to our very senses, in the excellence and beauty of the works which He has made!

It is the same, with respect to the *mind*, though we know it *only by its susceptibilities of affection*, in the various feelings of our momentary consciousness, and cannot hope to know it, but as the permanent subject of all these separate consciousnesses; to know *thus relatively only*, the affections even of one single substance, is to have a field of the most boundless and inexhaustible wonders ever present and open to our inquiry! It may be said, to comprehend every thing which we perceive, and remember, and imagine, and compare, and admire, all those mysterious processes of thought, which, in the happy efforts of the philosopher and the poet, are concerned in the production of their noblest results, and which are not less deserving of our regard, as they are

every moment exercised by all, in the humble intellectual functions of common life. In analyzing and arranging the mental phenomena, then, we consider phenomena, that are diversified, indeed, in individuals, but, as species, are still common to all; for there is no power possessed by the most comprehensive intellect, which it does not share, in some proportion, with the dullest and rudest of mankind. All men perceive, remember, reason,—all, to a certain degree at least, from their little theories, both physical and metaphysical, of the conduct of their fellow men, and of the passing events of nature; and all, occasionally, enliven their social intercourse, or their solitary hours, with inventions of fancy, that last but for a moment indeed, and are not worthy of lasting longer, but which are products of the same species of intellectual energy, that gave existence to those glorious works, to which ages have listened with increasing reverence, and which, immortal as the spirits that produced them, are yet to command the veneration of every future age. When we see before us, in its finished magnificence, a temple, appropriated to the worship of the Supreme Being, and almost worthy of being filled with his presence, we scarcely think, that it is erected according to the same simple principles, and formed of the same *stone and mortar*, as the plain dwellings around us, adapted to the hourly and humble uses of domestic life; and, by a similar illusion, when we consider the splendid works of intellectual art, we can scarcely bring ourselves to think, that genius is but a form of general tendencies of association, of which all par-

take; and that its magnificent conceptions, therefore, rise, according to the same simple laws which regulate the course of thought of the vulgar. In this universality of diffusion as general tendencies, that may be variously excited by varying circumstances, our intellectual powers are similar to those other principles of our nature,—our emotions, and whatever feelings more immediately connected with moral action have been usually distinguished by the name of our *active* powers. In the philosophy of both, we consider not a few distinguished individuals, as possessed of principles essentially distinct in kind, but the species *man*. They are to be found, wherever there is a human being; and we do not infer with more certainty, when we perceive the impression of a foot upon the sand, that *man* has been there, than we expect to find in him, whatever may be his state of barbarism or civilization, some form of the common powers, and passions, which, though directed perhaps to different objects, we have felt and witnessed in the society around us. "The two-legged animal," says Dr Reid, "that eats of nature's dainties what his taste or appetite craves, and satisfies his thirst at the crystal fountain; who propagates his kind as occasion and lust prompt; repels injuries, and takes alternate labour and repose; is like a tree in the forest, purely of nature's growth. But this same savage has within him the seeds of the logician, the man of taste and breeding, the orator, the statesman, the man of virtue, and the saint; which seeds, though planted in his mind by nature, yet, through want of culture

and exercise, must lie for ever buried, and be hardly perceivable, by himself, or by others." * Even of those passions of a prouder kind, which attract our attention only when they are on a theatre that allows their full display, some vestiges are to be traced *universally*; though, in different individuals, they may exist with very different degrees of influence, and though their influence, according to the degree of power possessed by the individual, may be attended with very different consequences, to the few, or the many, comprehended within the wide or narrow circle, to which his power extends.

> "Not kings alone,
> Each villager has his ambition too;
> No sultan prouder than his fetter'd slave.
> Slaves build their little Babylons of straw,
> Echo the proud Assyrian in their hearts,
> And cry, Behold the wonders of my might." †

It is this universal diffusion of sympathies and emotions, indeed, which gives its whole force to morality, as a universal obligation; and renders *ethics* truly a *science*.

Nature, in requiring the fruits of virtue *from all*, has not fixed the seeds of it, only in a few breasts. "Nulli præclusa virtus est, omnibus patet, omnes admittit, omnes invitat, ingenuos, libertinos, servos, reges et exsules; non eligit domum, nec censum; nudo homine contenta est." ‡ Virtue has no partial

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* Inquiry into the Human Mind, Introd. p. 7. 8*vo. Edit.*

† Young's Night Thoughts, vii. v. 392—397.

‡ Seneca de Beneficiis, lib. iii. c. 18.

favours or exclusions. She is open to all, she admits all, she invites all. She asks no wealth nor ancestry; but she asks *the man*,—the master or the slave, the cottager and his lord, the sovereign and the exile.

Though we know *mind*, then, only *relatively*, in the series of feelings, of which we are conscious, as we know matter relatively in the series of phenomena, which it exhibits to our observation, we have, in this relative knowledge, subjects worthy of the contemplation of beings permitted, in these shadowings of a higher power, to trace some faint image of the very majesty which formed them. Even of the humblest mind, as we have seen, the various affections, *sensitive*, intellectual, and moral, that arise in it as affections of our common nature, are truly admirable; and what an increase of sublimity do they acquire, in minds of higher powers! But still, it must be remembered, that even in minds the most sublime, as much as in the most *humble*, all which can be truly known is the *successive phenomena* which they exhibit, not the essence of the spiritual substance itself; and that, even of these successive phenomena, though we become gradually acquainted with more and more, we probably never can arrive at any bound which is to *limit their number*. The susceptibilities of the mind, by which, in different circumstances, it may exist in different states, are certainly as truly *infinite* as the space which surround us, or as that eternity which, in its progress, measures the successions of our feelings, and all the other changes in the universe. Every new thought,

or combination of thoughts, is in truth a new state or *affection*, or *phenomenon* of the *mind*, and, therefore, a proof of the *susceptibility* of that new affection, as an original quality of the mind; and every rise in knowledge, from age to age, and from inquirer to inquirer, is thus only the *developement* of *susceptibilities*, which the mind possessed before, though the circumstances which at last called them forth, never existed till the moment of the developement. What should we think of the half-naked savage of some barbarous island, if, in the pride of his ignorance, he were to conceive his own thoughts and feelings to be the noblest of which the human intellect is capable? and, perhaps, even the mind of a Newton, is but the mind of such a savage, compared with what man is hereafter to become.

LECTURE X.

THE SAME SUBJECT CONTINUED.

GENTLEMEN, after laying down those general laws of physical inquiry, I had begun, in the conclusion of my last Lecture, to consider them, more particularly in their relation to the study of mind.

One very important circumstance of agreement in the physical investigations of mind and matter, we found to be, that, of both matter and mind, the successive *phenomena* are all which we truly know, though by the very constitution of our nature, it is impossible for us not to ascribe these to some *permanent subject*. *Matter* is the *permanent subject of certain qualities,* extension, and its consequent divisibility, attraction, repulsion; that is to say, it is the permanent exhibiter to us of certain varying *phenomena which we observe*. *Mind* is the permanent subject of certain qualities or states or affections of a different class—*perception, memory, reason, joy, grief, love, hate;* that is to say, of *certain varying phenomena of which we are conscious.* What *matter* is, *independent of our perception;*

what *mind* is, independent of *its temporary varieties of feeling*, it is impossible for us to discover; since whatever new knowledge of matter we can suppose ourselves to acquire, must be acquired *by our perception*, and must, therefore, be relative to *it*; and whatever new knowledge we can suppose ourselves to acquire of *mind*, must be itself a *state or affection of the mind*, and, therefore, only a new *mental phenomenon* to be added to those with which we were before acquainted, as one of the many states in which the permanent substance *mind* is capable of existing.

Since it is only by their relation to our own feelings, then, that substances can be known to us, beyond these relations it would be vain for us to think of penetrating; as vain, at least, as would be the attempts of the deaf to discover, by a process of reasoning, the nature of the *sensations of sound*, or of the blind to determine, not the lines of direction merely, in which the various coloured rays of light pass after refraction, for these they *may* optically determine, but the various *sensations*, corresponding with all the varieties of tint into which the sunbeams are broken by the drops of a falling shower. The *substance* matter, the substance *mind*, are, in this respect, to the whole race of metaphysical inquirers, what the rainbow, as a series of colours, is to opticians, who have never seen.

The absurdity of such inquiries, into anything *more* than the *mere phenomena*, if it be not sufficiently evident of itself, may, perhaps, be rendered more apparent, by a very easy supposition. Let us

imagine the permanent unknown substance *matter*, and the permanent unknown substance *mind*, to be rendered, by the same divine power which made them, altogether different in their *own absolute essence*, as they exist *independently*, but to exhibit *relatively*, precisely the same phenomena as at present,—that spring, and summer, and autumn, and winter, in every appearance that can affect our organs of perception, succeed each other as now, pouring out the same profusion of foliage, and flowers, and fruits, and after the last gladness of the vintage and the harvest, sweeping the few lingering blossoms, with those desolating blasts which seem like the very destroyers of nature, while they are only leading in, with greater freshness, under the same benevolent eye of Heaven, the same delightful circle of beauty and abundance,—that, in mind, the same sensations are excited by the same objects, and are followed by the same remembrances, and comparisons, and hopes, and fears;—in these circumstances, while *all the phenomena which we observe*, and *all the phenomena of which we are conscious*, continue *exactly the same*, can we believe, that we should be able to discover the *essential* change, which, according to this *supposition*, had taken place, in the *permanent subjects* of these unvaried phenomena! And, if, as long as the external and internal phenomena continued exactly the same, we should be incapable of discovering, or even suspecting, the slightest change, where, by supposition, there had been a change so great, how absurd is it to conceive that the changed or unchanged nature of the

substance itself, as it exists independently of the *phenomenon*, ever *can* become known to us.

He, indeed, it may always safely be presumed, knows *least* of the *mind*, who thinks that he knows its *substance best*. "What is the soul?" was a question once put to Marivaux. "I know nothing of it," he answered, "but that it is spiritual and immortal." "Well," said his friend, "let us ask Fontenelle, and *he* will tell us what it is." "No," cried Marivaux, "ask any body *but* Fontenelle, for he has too much *good sense* to *know any more about it than we do*."

It is to the *phenomena only*, then, that our attention is to be given, not to any vain inquiries into the absolute *nature of the substances which exhibit the phenomena*. This alone is legitimate philosophy,—philosophy which must for ever retain its claim to our assent, amid the rise and fall of all those spurious speculations, to which our vanity is so fond of giving the names of *theory* and *system*. *Whatever* that may be, in itself, which feels, and thinks, and wills,—*if* our feelings, and thoughts, and volitions be the same—all which we can know, and compare, and arrange, must be the same; and, while we confine our attention to these, the general laws of their succession which we infer, and the various relations which they seem to bear to each other, may be *admitted equally* by those whose opinions, as to the absolute nature of the feeling and thinking principle, differ fundamentally. It requires no peculiar supposition, or belief, *as to the*

nature of the mind, to know, that its trains of thought are influenced, by former habits, or casual association; and every fact, which the immaterialist has accurately *observed* and *arranged*, with respect to the influence of habit or association, may thus, with equal reason, form a part of the intellectual and moral creed of the materialist also.

On these two systems it is not at present my intention to make any remarks; all which I wish, *now*, is to explain to you, how independent the real *philosophy of the mind* is, of any fanciful conjectures, which may be formed, with respect to its essence. It differs from these, as Mr Stewart has well observed, in the same manner "as the inquiries of Galileo, concerning the laws of moving bodies, differ from the disputes of the ancient Sophists, concerning the existence and the nature of motion," or as the conclusions of Newton, with respect to the law of gravitation, differ from his query concerning the mode in which he supposed that gravity might possibly be produced. The *hypothesis*, involved in the query, you *may admit* or *reject*; the conclusions, with respect to the law of gravitation itself, as far as relates to our planetary system, are, I may say, almost *beyond your power of rejecting*.

The philosophy of mind, then, and the philosophy of matter, agree, in this respect, that our knowledge is, in both, confined to *the mere phenomena*. They agree also, in the two species of inquiry which they admit. The phenomena of *mind*, in the same manner as we have seen in the case of *matter*, may be

considered as *complex* and susceptible of *analysis*, or they may be considered, as successive in a certain *order*, and bearing, therefore, to each other the reciprocal relation of *causes and effects.*

That we can know the phenomena, only as far as we have attended to their sequences, and that, without experiment, therefore, it would have been impossible for us to *predict* any of their successions, is equally true, in mind as in matter. Many of the successions, indeed, are so familiar to us, that it may appear to you, at first, very difficult to conceive, that we should not have been able, at least with respect to *them*, to predict, originally, *what* antecedents would have been followed by *what* consequents. We may allow certainly, that we should not have been able to foresee the pleasure which we receive from the finer works of imitative art—from the successions, or co-existences, in music, of sounds, that, *considered separately*, would scarcely be counted among the sources of delight—from the charm of versification, that depends on circumstances, so very slight, as to be altogether destroyed, and even converted into pain, by the change of quantity of a single syllable. But, that the remembrance of pleasure should not be attended with *desire* of enjoying it again, seems to us almost inconsistent with the very nature of the pleasing emotion. In like manner, we may allow, that we could not have predicted the *sympathy* which we feel with the distresses of others, when they arise from causes that cannot affect *us*, and yet make, for the time, the agony

which we merely behold, *a part of our own existence.* But we can scarcely think, that we require *any experience,* to know, that the contemplation of pain, which we may ourselves have to endure, should be the cause of that painful feeling, to which we give the name of *fear,* or that the actual suffering should be accompanied with the *desire of relief.* The truth is, however, that, in all these cases, and in all of them *equally,*—it would have been impossible, but for experience, to predict the consequent of any of the antecedents. The *pleasure,* which we feel, in the contemplation of a work of art, the *pain,* which we feel, at the sight of the misery of others, are as much the natural effects of *states of mind preceding them,* as the fear of pain is the effect of the consideration of pain as hanging over us. Our various feelings, *similar* or *dissimilar, kindred* or *discordant,* are all *mere states of the mind;* and there is nothing, in any *one* state of the mind, *considered in itself,* which, necessarily, involves *the succession of any other state of mind.* That *particular state,* for example, which constitutes *the mere feeling of pain,* instead of being attended by that *different state* which constitutes the *desire of being freed from pain,* might have continued, as one uniform feeling, or might have ceased, and been succeeded by some other state, though in the original *adaptation* of our mental frames, by that Creator's wisdom which planned the sequences of its phenomena, the *particular affection,* which consitutes *desire,* had *not been* one of the innumerable *varieties of affec-*

tion, of which the mind was for ever to be susceptible.

What susceptibilities the mind has exhibited in the ordinary circumstances in which it has been placed, we know, and they have been limited to a certain number, corresponding with the feelings which have arisen in these circumstances. But the Almighty Power, who fixed this particular number, might have increased or lessened the number at His pleasure, in the same manner, as He might, at His pleasure, have multiplied or diminished the whole number of His animated creatures; and, where there has been no limit, but the will of the *Limiter*, it is experience only which can give us any knowledge of the actual limitation. We are always too much inclined to believe, that we know what must have been, because we know what is,—and to suppose ourselves acquainted, not merely with the gracious ends which Supreme Goodness had in view, *in creating us*, but with the very object, which each separate modification of our intellectual and moral constitution was intended to answer. I would not, indeed, go so far as Pope, in that passage of the Essay on Man, in which he seems to imply, that our ignorance of the wise and harmonious intentions of Providence, in the constitution of our mind, is like the ignorance of the inferior animals, as to the motives which influence the follies and inconsistencies of their capricious master.

"When the proud steed shall know, why man restrains
His fiery course, or drives him o'er the plains,

When the dull ox, why now he breaks the clod,
Is now a victim, and now Egypt's God,—
Then shall man's pride and dulness comprehend
His action's, passion's, being's, use and end;
Why doing, suffering, check'd, impell'd; and why
This hour a slave, the next a deity."*

Our Divine Author has not left us, *even now*, to darkness like this. We know, in a great measure, the use and end of our actions and passions, because we know *who it is* who has formed us to *do* and to *bear*,—and who, from His own moral excellence, cannot have given us any susceptibility, *even that of suffering*, which does not tend, upon the whole, to strengthen virtue, and to *consecrate*, as in some purifying sacrifice, the sufferer of a moment to affections more holy, and happiness more divine. Yet, though we know, in this general sense, our action's, passion's, being's use and end, *as subservient to the universal plan of Infinite Goodness*, we are not so well acquainted with the *particular uses* of each state of the mind, as to have been able to *predict* it, merely as a part or consequence of the plan. The knowledge of every successive modification of our thought, is still as much the result of experience, as if the gracious plan, to which all these successive modifications are instrumental, were wholly unknown to us:—Yet, such is the influence of habit, in familiarizing us to phenomena, that we think, that experience is *nothing*, *only* in those cases, in

* Ep. i. v. 61—68—Works, vol. III. p. 5, 6.

which the power of experience has been most *frequently* and *familiarly* felt; and while, in the rarer successions of feelings, we allow, that there are phenomena of the mind, which we could not have foreknown, we find it difficult to imagine, in the recurrences of the common mental phenomena, that, even originally, it could have required any peculiar foresight to predict, what we are now conscious of predicting with a readiness, that seems to us almost like the instant glance of intuition.

In the philosophy of external matter, the greater or less familiarity of events produces an illusion exactly similar. There are certain phenomena, which, we readily admit, could not, of themselves, and without experience, have indicated to us, either the changes which preceded them, or the changes which were to follow; while there are other phenomena, more familiar, which seem to us to require *no* experience, for informing us, both of their antecedents and consequents,—merely because they have been of such frequent occurrence, that we do not remember the time, when we were ignorant of them, or of the circumstances, by which they are usually preceded and followed. That a magnetic needle should tend to the north, rather than to any other point,—and that glass, or amber, rubbed in a certain manner, should exhibit the very striking phenomena of electricity, transmitting this power through certain substances, and not transmitting it through others, which have nothing peculiar in their sensible qualities, to mark them as less or better fitted for this communication, appear to us to be facts, which we could not have

known, till we had actually witnessed them. But that a stone, rolled from the hand, should continue to move in the same direction, after quitting the hand, seems a fact, which it must have been easy for us to foresee. We are not aware, that it is only the more familiar occurrence of the one event, than of the others, which makes its sequence appear more obvious; and that, but for this greater familiarity, we might as readily have supposed, that a stone, after quitting the hand which flung it, should have remained in the air, or fallen to the ground, as that the needle, without any tendency to the north, would remain stationary, to whatever point of the compass we might turn it.

Such is the influence of early acquaintance with the more frequent and obvious events, whether in mind or in matter. We have become familiar with them, and with their causes and consequences, long before reflection; and it is not very wonderful, that we should conceive ourselves to have *known always*, what we do not remember to have ever learned.

That to know, in the series of mental phenomena, *what* are the *antecedents*, and *what* their *consequents*, is one great branch of the Philosophy of Mind, I surely need not attempt to demonstrate; and it would be equally superfluous to demonstrate its importance, especially after the remarks—if even these were necessary,—which I made in a former Lecture; since it is not merely, as a very interesting branch of *speculative* knowledge, that it is valuable, but, as I then showed, still more valuable, as the foundation of every intellectual *art*, especially of those noble and

almost divine arts, which have, for their immediate object, the illumination and amendment of mankind —the art of training ignorance to wisdom, and even wisdom itself to knowledge still more sublime,—of fixing *youthful innocence* in the *voluntary* practice of virtue, that is as yet little more than an *instinct* of which it is scarcely conscious,—of breathing that moral inspiration, which strengthens feeble goodness, when it is about to fall, tames even the wildest excesses of the wildest passions, and leads back, as if by the invisible power of some guardian spirit, even Guilt itself, to the happiness which it had lost, and the holier wishes, which it rejoices to feel *once more*.

Since the phenomena of the mind, however, are *obviously successive*, like those of matter, the consideration of the sequences of the mental phenomena, and the arrangement of them in certain classes, may appear to you sufficiently analogous to the consideration and arrangement of the sequences of the phenomena of the material world. But that there should be any inquiries, in the philosophy of mind, corresponding with the inquiries into the *composition* of bodies, may appear to you improbable, or almost absurd; since the mind, and consequently its *affections*—which I use as a short general term for expressing all the variety of the modes in which it can be affected, and which, therefore, are only the mind itself as it exists in different states,—must be always *simple* and *indivisible*. Yet, wonderful, or even absurd, as it may seem,—notwithstanding the absolute simplicity of the mind itself, and consequently of all its feelings or momentary states,—the Science of

Mind is, in its most important respects, a source of analysis; or of a process which I have said to be *virtually* the same as analysis; and it is only, as it is in this virtual sense *analytical*, that any discovery, at least that any important discovery, can be expected to be made in it.

It is, indeed, scarcely possible to advance, even a single step, in intellectual physics, without the necessity of performing some sort of analysis, by which we reduce to simpler elements, some complex feeling that seems to us virtually to involve them. In the mind of man, all is in a state of constant and ever-varying complexity, and a single sentiment may be the slow result of innumerable feelings. There is not a single pleasure, or pain, or thought, or emotion, that may not,—by the influence of that associating principle, which is afterwards to come under our consideration,—be so connected with *other pleasures*, or *pains*, or *thoughts*, or *emotions*, as to form with them, for ever after, an union the most intimate. The complex, or seemingly complex, phenomena of thought, which result from the constant operation of this *principle of the mind*, it is the labour of the *intellectual inquirer* to *analyze*, as it is the labour of the *chemist* to reduce the compound bodies, on which he operates, however close and intimate their combination may be, to their constituent elements. The process, and the instruments by which the analyses are carried on, are, indeed, as different as matter is from mind,—cumbrous as matter, in the one case,—in the other, simple and spiritual as mind itself. The aggregates of *matter* we analyze by the

use of other matter, adding substance after substance, and varying manipulation after manipulation;—the complex mental phenomena we analyze virtually by mere reflection; the same individual mind being the *subject* of analysis, the instrument of analysis, and the analysing inquirer.

When I speak, however, of the union of separate thoughts and feelings in one complex sentiment or emotion, and of the *analytic* power of reflection or reason, it must not be conceived, that I use these words in a sense *precisely the same* as when they are applied to matter. A *mass of matter*, as we have seen, is, in truth, not *one* body merely, but a *multitude* of contiguous bodies; all of which, at the time, may be considered as having a separate existence, and as placed together more by accidental apposition, than by any essential union;—and *analysis* is nothing more than what its etymology denotes, a *loosening* of these from each other. In strictness of language, *this composition* and *analysis cannot* take place in *mind*. Even the most *complex* feeling is still only *one* feeling; for we cannot divide the states or affections of our mind into separate self-existing *fractions*, as we can divide a compound mass of matter into masses, which are separate and self-existing,—nor distinguish *half* a joy or sorrow from a *whole* joy or sorrow. The conception of *gold*, and the conception of a *mountain*, may separately arise, and may be followed by the conception of a *golden mountain*; which may be said to be a *compound* of the two, in the sense in which I use that word, to express merely, that what is thus termed compound or complex *is the result* of certain previous feelings,

to which, as if existing together, it is felt to have the virtual relation of equality, or the relation which a whole bears to the parts that are comprehended in it. But the conception of a *golden mountain* is still as much *one* state or feeling of one simple mind, as either of the separate conceptions of gold and of a mountain which preceded it. In cases of this kind, indeed, it is the very nature of the resulting feeling to seem to us thus complex; and we are led, by the very constitution of our mind itself, to consider what we term a complex idea, as *equivalent* to the separate ideas from which it results, or as comprehensive of them,—as being truly to our conception—though to our conception only—and, therefore, only virtually or relatively to us the inquirers—the same, as if it were *composed* of the separate feelings *co-existing*, as the elements of a body *co-exist in space.*

It is this feeling of the relation of certain states of mind to certain other states of mind, which solves *the whole mystery of mental analysis*, that seemed at first so inexplicable,—the virtual *decomposition*, in our thought, of what is, by its very nature, *indivisible.* The mind, indeed, it must be allowed, is absolutely simple in all its states; every separate state or affection of it must, therefore, be absolutely simple; but in certain cases, *in which a feeling is the result of other feelings preceding it*, it is its very nature to appear to *involve* the *union* of those *preceding feelings*; and to distinguish the separate sensations, or thoughts, or emotions, of which, on reflection, it thus seems to be comprehensive, is to perform an *intellectual process*, which, though not a

real analysis, is an analysis at least *relatively to our conception*. It may still, indeed, be said with truth, that the different feelings,—the states or affections of mind which we term *complex*,—are absolutely *simple* and *indivisible*, as much as the feelings or affections of mind which we term simple. Of this there can be no doubt. But the complexity with which alone we are concerned is not *absolute* but *relative*,—a seeming complexity, which is *involved* in the very feeling of relation of every sort. That we are thus impressed with certain feelings of relation of conceptions to conceptions, no one can doubt who knows, that all science has its origin in these very feelings; and *equivalence*, or *equality*, is one of those *relations*, which, from its very constitution, it would be as impossible for the mind, in certain circumstances, *not* to feel, as it would be impossible for it, in certain other circumstances, not to have those *simple* feelings which it compares. With perfect organs of vision, and in the full light of day, it is not possible for us to look on a tree, or a rock, without perceiving it; but it is not *more* possible for us to form a conception of two trees, without regarding this state of mind, *simple though it truly is, when absolutely considered* as virtually *involving*, or as *equal* to, two of those separate feelings, which constituted the conception of a single tree.

On this mere feeling of virtual equivalence, is founded all the demonstration of those sciences, which claim the glory of being peculiarly demonstrative; our equations and proportions of abstract number and quantity involving continually this analytic va-

luation of notions, as *reciprocally* proportional. Our conception of an angle of forty-five degrees is *one* state or affection of mind,—one state of one simple indivisible substance;—such, too, is our conception of a right angle. Our notion of *four* or *eight* is as much *one* affection of mind, as our notion of a simple unit. But, in reflecting on the separate states of mind which constitute these notions, we are impressed with certain relations which they seem, to us, reciprocally to bear, and we consider the angle of forty-five degrees as equal to half the angle of ninety degrees, and our notion of eight as involving or equal to two of four. If *one* state of mind, which constitutes the notion of a certain abstract number or quantity, *had not* been considered in this sort of virtual comprehensiveness, as bearing the relation of *equality*, or proportion, to *other* states of mind, which constitute other abstract notions of the same species, mathematics would not merely have lost their certainty, but there could not, in truth, have been any such science as mathematics.

The *intellectual analysis*, which appears to me to constitute so important a part of the science of mind, is nothing more than the successive developement, in application to the various mental phenomena, of *this feeling of equivalence, or comprehensiveness*, which is not confined to the mathematical notions of *number* and *quantity*, (though, from the greater simplicity of these, *their* equality or proportion may be more accurately distinguished,) but extends to *every thought and feeling which we regard as complex*, that is to say, to almost every thought and feeling

of which the mind is susceptible. We compare *virtue* with *virtue*, *talent* with *talent*, not, indeed, with the same precision, but certainly in the same manner, and with the same feeling of proportion, as we compare intellectually *one* angle with *another*; and we ask, what ideas are involved in our complex notions of *religion* and *government*, with as strong a feeling that a number of ideas *are* virtually involved or comprehended in them, as when we ask, how often the square of two is repeated in the cube of six.

Analysis, then, in the Science of Mind, you will perceive, is founded wholly on the feeling of relation which one state of mind seems to us to bear to other states of mind, as comprehensive of them; but, while this seeming complexity is felt, it is the same thing to our analysis, as if the complexity, instead of being virtual and relative only, were absolute and real. It may be objected to the application of the term *analysis* to the Science of Mind, that it is a term which, its etymology shews, as I have already admitted, to be borrowed from matter, and to convey, as applied to the mind, a notion in some degree different from its etymological sense. But this is an objection which may be urged, with at least equal force, against *every* term, or *almost* every term, of our science. In our want of a peculiar metaphysical language, we are obliged in this, as in every other case, to borrow a metaphysical language from the material world; and we are very naturally led to speak of mental *composition* and *analysis*, since, to the mind which feels the relation of equivalence or comprehensiveness, it is precisely the same thing as if our ideas

and emotions, that result from former ideas and emotions, and are felt by us as if involving these in one complex whole, could be actually divided into the separate elements which appear to us thus virtually or relatively to be comprehended in them.

It is from having neglected *this* branch of the physical investigation of the mind,—by far the more important of the two,—and having fixed their attention solely on the *successions* of its phenomena, that some philosophers have been led to disparage the science *as fruitless of discovery*, and even to deride the pretensions or the hopes of those who do not consider it as absolutely exhausted;—I will not say *now* merely, in the present improved state of the science, but as not exhausted almost before philosophy began, in the rude consciousness of the rudest savage, who saw, and remembered, and compared, and hoped, and feared; and must, therefore, it is said, have known what it is to *see*, and *remember*, and *compare*, and *hope*, and *fear*.

If the phenomena of the mind were to be regarded merely as successive,—which is *one* only of the two lights in which they may be physically viewed,—it might, indeed, be said, with a little more appearance of truth, that this *mere succession* must be as familiar to the unreflecting mind as to the mind of the philosopher; though, even in this limited sense, the remark is far from being accurate. But the phenomena have *other* relations, as well as those of succession,—relations which are not involved in the mere consciousness of the moment, but are discoverable *by reflection only*,—and to the know-

ledge of which, therefore, addition after addition may be made by every new generation of reflecting inquirers. From the very instant of its first existence, the mind is constantly exhibiting phenomena more and more complex,—sensations, thoughts, emotions, all mingling together, and almost every feeling modifying, in some greater or less degree, the feelings that succeed it;—and as, in chemistry, it often happens, that the qualities of the separate ingredients of a compound body are not recognizable by us, in the apparently different qualities of the compound itself,—so, in this spontaneous *chemistry of the mind*, the compound sentiment, that results from the association of former feelings, has, in many cases, on first consideration, so little resemblance to these constituents of it, as formerly existing in their elementary state, that it requires the most attentive reflection to separate, and evolve distinctly to others, the assemblages which even a few years may have produced. Indeed, *so* complex are the mental phenomena, and *so* difficult of analysis,—*even in those most common cases*, which may be said to be *familiar to all*,—that it is truly wonderful that the difficulty of this analysis, and the field of inquiry which this very difficulty opens, should not have occurred to the disparagers of intellectual discovery, and made them feel, that what *they* were not able to explain, could not be so well known to *all mankind* as to be absolutely incapable of additional illustration. The *savage*, they will tell us, is conscious of what he feels in *loving his country*, as well as the sage; but, does

he know *as well*, or can even the sage *himself* inform us *with precision*, what the various *elementary* feelings have been, that have successively modified, or, rather, that have constituted this local attachment? The peasant, indeed, may have the feeling of beauty, like the *artist* who *produces* it, or the *speculative inquirer*, who *analyses* this very complex emotion—

> " Ask the swain,
> Who journeys homeward, from a summer day's
> Long labour, why, forgetful of his toils
> And due repose, he loiters to behold
> The sunshine gleaming, as through amber clouds,
> O'er all the western sky? Full soon, I ween,
> His rude expression, and untutor'd airs,
> Beyond the power of language, will unfold
> The form of Beauty smiling at his heart,
> How lovely, how commanding!" *

But the *mere emotion* which beauty produces, is not the knowledge of the *simpler feelings that have composed or modified it;* and though the *pleasure* and *admiration* were to continue *exactly the same*, the peasant would surely have *learned something*, if he could be made to understand, that beauty was *more* than the form and colour which his eye perceived. What is thus true of beauty, as differently understood by the peasant and the philosopher, is true, in like manner, of all the other complex mental phenomena. It would, indeed, be as reasonable to affirm, that, because we all *move* our limbs, we are all equal-

* Pleasures of Imagination, Book III. v. 526—535.

ly acquainted with the *physiology of muscular motion*; or, to take a case still more exactly appropriate, that we know all the sublimest truths of *arithmetic* and geometry, because we know all the numbers and figures of the mere relations of which these are the science,—as that we are all acquainted with the *physiology* of the mind, and the *number of elements* which enter into our various feelings, because we all perceive, and remember, and love, and hate. It is, it will be allowed, chiefly, or perhaps wholly, as it is *analytical*, that the science of mind admits of *discovery*; but, *as* a science of analysis, in which new relations are continually felt on reflection, it presents us with a field of discovery as rich, and, I may say, almost as inexhaustible in wonders, as that of the universe without.

"It is thus," I have elsewhere remarked, "even in phenomena, which seem so simple as scarcely to have *admitted* combination, what wonders have been developed by scientific inquiry! Perception itself, that primary function of the mind, which was surely the same before Berkeley examined the laws of vision as at present, is now regarded by us very differently, in relation to the most important of its organs; and it would not be easy to find, amid all the brilliant discoveries of modern chemistry, and even in the whole range of the physics of matter, a proposition more completely *revolting to popular belief*, than that, which it is now the general faith of philosophers, that the sense of sight, which seems to bring the farthest hills of the most extended landscape, and the very boundlessness of space before

our view, is, of itself, incapable of shewing us a single line of longitudinal distance."*

If, as has been strongly affirmed, the science of mind be a science that is, by its very nature, insusceptible of improvement by discovery, it must have been so, before the time of Berkeley as now, and it might have been a sufficient answer to all the arguments which he adduced in support of his theory of vision, that the phenomena which he boasted to have analysed, were only the common and familiar phenomena of a sense that had been exercised by all mankind.

"The vulgar," I have said, "would gaze with astonishment, were they to perceive an electrician inflame gunpowder with an icicle; but they would not be less confounded by those dazzling subtleties with which metaphysicians would persuade them, that the very actions which they feel to be benevolent and disinterested, had their source in the same principle of selfishness, which makes man a knave or a tyrant. That this particular doctrine is false, is of no consequence; the whole theory of our moral sentiment presents results which are nearly as wonderful; and, indeed, the falseness of any metaphysical doctrine, if rightly considered, is itself one of the strongest proofs that the science of mind *is* a science which admits of discovery; for, if *all men* had *equal* knowledge of all the relations of all the phenomena of their mind, no one could advance an opinion on the subject, with real belief of it, which another could

* Inquiry into the Relation of Cause and Effect, 2d edition, p. 32, 33.

discover to be erroneous. In the different stages of the growth of a passion, what a variety of appearances does it assume; and how difficult is it often to trace, in the confusion and complication of the paroxysm, those calm and simple emotions, in which, in many cases, it originated!—The love of domestic praise, and of the parental smile of approbation, which gave excellence to the first efforts of the child, may expand, with little variation, into the love of honest and honourable fame; or, in more unhappy circumstances, may shoot out from its natural direction, into all the guilt and madness of atrocious ambition;—and can it truly be maintained, or even supposed, for a moment, that all this fine *shadowing* of feelings into feelings, is known as much to the rudest and most ignorant of mankind, as it is to the profoundest intellectual inquirer? How different is the passion of the miser, as viewed by himself, by the vulgar, and by philosophers! He is conscious, however, only of the accuracy of his reasonings on the probabilities of future poverty, of a love of economy, and of temperance, and certain too of strict and rigid justice. To common observers, he is only a lover of money. They content themselves with the passion, in its mature state; and it would not be easy to convince them, that the most self-denying avarice involves as its essence, or at least originally involved, the love of those very pleasures and accommodations, which are now sacrificed to it without the least apparent reluctance."*

* Inquiry into the Relation of Cause and Effect, 2d edition, p. 26—30. with some alterations and exclusions.

> "This light and darkness, in our chaos join'd,
> What shall divide? The God within the mind."

There is, indeed, a chaos, in the mind. But there is a spirit of inquiry, which is for ever moving over it, *slowly* separating all its mingled elements. It is only when these are separated, that the philosophy of mind can be complete, and incapable of further discovery. To say that it is now complete, because it has in it every thing which can be the subject of analysis, is as absurd, as it would be to suppose that the ancient chaos, when it contained merely the elements of things, before the spirit of God moved upon the waters of the abyss, was already that world of life, and order, and beauty, which it was after to become.

The difficulty which arises in the physical investigation of the mind, from the apparent simplification of those thoughts and feelings which, on more attentive reflection, are felt to be as if compounded of many other thoughts and feelings, that have previously existed together, or in immediate succession, is similar to the difficulty which we experience in the physics of matter, from the imperfection of our senses, that allows us to perceive masses only, not their elemental parts, and thus leads us to consider as *simple* bodies, what a single new experiment may prove to be composed of *various elements*.

In the *intellectual* world, the slow progress of discovery arises, in like manner, from the obstacles which our feeble power of discrimination presents to our mental analysis. But, in mind, as well as in matter, it must be remembered, that it is to this

very feebleness of our discriminating powers, the whole analytic science owes its origin. If we could distinguish instantly and clearly in our complex phenomena of thought, their constituent elements—if, for example, in that single and apparently simple emotion, which we feel, on the sight of *beauty*, as it lives before us, or in the contemplation of that *ideal* beauty, which is reflected from works of art, we could discover, as it were, in a single glance, all the innumerable feelings, which, perhaps, from the first moment of life, have been conspiring together, and blending in the production of it—we should then feel as little interest in our *theories of taste*, as in a case formerly supposed, we should have done in our theories of combustion, if the most minute changes that take place in combustion had been at all times distinctly visible. The mysteries of our intellect, the "altæ penetralia mentis," would then lie for ever open to us; and what was said poetically of Hobbes, in the beautiful verses addressed to him on his work *De Natura Hominis*, would be applicable to all mankind, not poetically, but in the strictness of philosophic truth.

"Quæ magna cœli mœnia, et tractus maris,
Terræque fines, siquid aut ultra est, capit,
Mens ipsa tandem capitur: Omnia hactenus
Quæ nosse potuit, nota jam primum est sibi.

"Consultor audax, et Promethei potens
Facinoris animi! quis tibi dedit deus
Hæc intueri sæculis longe abdita,
Oculosque luce tinxit ambrosia tuos?
Tu mentis omnis, at tuæ nulla est capax.

Hoc laude solus fruere: divinum est opus
Animam creare; proximum huic, ostendere.

" Hic cerno levia affectuum vestigia,
Gracilesque Sensûs lineas; video quibus
Vehantur alis blanduli Cupidines,
Quibusque stimulis urgeant Iræ graves,
Hic et Dolores et Voluptates suos
Produnt recessus; ipsi nec Timor latet."

LECTURE XI.

APPLICATION OF THE LAWS OF PHYSICAL INQUIRY, TO THE PHILOSOPHY OF MIND, CONCLUDED.—ON CONSCIOUSNESS, AND ON MENTAL IDENTITY.

In my last Lecture, Gentlemen, I considered, very fully, the two species of inquiry which the philosophy of *mind* admits, in exact analogy to the two species of inquiry in the philosophy of *matter*,—the consideration of the mental phenomena, as *successive*, and therefore susceptible of arrangement in the order of their succession, as *causes* and *effects*,—and the consideration of them as *complex*, and therefore susceptible of *analysis*. I stated to you, that it was chiefly, if not wholly, in this latter view, as *analytical*, that I conceived the philosophy of mind to be a science of progressive discovery; though, *as a science of analogy*, it has not merely produced results, as astonishing, perhaps, in some cases, as any of those which the analysis of matter has exhibited, but presents still a field of inquiry, that may be considered as *inexhaustible*; since the mind cannot exist, without forming continually new combinations, that modify its subsequent affections, and vary, therefore, the *products*, which it is the labour of our in-

tellectual analysis to reduce to their original elements.

What the *chemist* does, in *matter*, the *intellectual analysist* does *in mind*; the *one* distinguishing by a purely *mental* process of reflection, the elements of his *complex feelings*, as the *other* operates on his *material* compounds, by processes that are themselves *material*. Though the term analysis, however, may be used in reference to both processes, the mental, as well as the material, since the result of the process is virtually the same in both, it has been universally employed by philosophers, in the laws of the mind, without any accurate definition of the process; and I was careful, therefore, to explain to you the peculiar meaning, in which it is *strictly* to be understood in our science; that you might not extend to the *mind* and its affections, that *essential divisibility*, which is inconsistent with its very nature; and suppose that, when we speak of *complex notions*, and of thoughts and feelings that are *united* by *association* with other thoughts and feelings, we speak of a plurality of separable things. The *complex mental phenomena*, as I explained to you, are complex *only in relation to our mode of conceiving them*. They are, strictly and truly, as simple and indivisible states of a substance, which is necessarily in *all* its states simple and indivisible—the *results*, rather than the *compounds*, of former feelings,—to which, however, they seem to us, and from the very nature of the feelings themselves, cannot *but* seem to us, to bear the same species of relation, which a *whole* bears to the parts that compose it. The office

of *intellectual analysis*, accordingly, in the mode in which I have explained it to you, has regard to this *relation* only. It is to trace the various affections or states of mind that have successively contributed, to *form* or to *modify* any peculiar sentiment or emotion, and to develope the elements, to which, *after tracing this succession*, the resulting sentiment or emotion is *felt* by us to bear virtually that relation of seeming *comprehensiveness* of which I spoke.

If, indeed, our perspicacity were so acute that we could distinguish immediately *all the relations* of our thoughts and passions, there could evidently be no *discovery* in the science of mind; but, in like manner, what *discovery* could there be, in the analysis of *matter*, if our senses were so quick and delicate, as to distinguish immediately all the elements of every compound? It is only slowly that we discover the composition of the masses without; and we have therefore a science of chemistry:—It is only slowly that we discover the relations of complex thought to thought; and we have therefore a science of mental analysis.

It is to the imperfection of our faculties, then, as forcing us to *guess* and *explore* what is half concealed from us, that we owe our laborious experiments and reasonings, and consequently all the science which is the result of these; and the proudest discoveries which we make may thus, in one point of view, whatever dignity they may give to a few moments of our life, be considered as proofs and memorials of our general weakness. If, in its relation to matter, philosophy be founded, in a very great

degree, on *the mere badness of our eyes*, which prevents us from distinguishing accurately the minute changes that are constantly taking place in the bodies around us; we have seen, in like manner, that, in its relation to the *mind*, it is founded chiefly, or perhaps wholly, on the imperfection of our power of discriminating the *elementary feelings*, which compose our great complexities of *thought* and *passion;* the various relations of which are felt by us only on attentive reflection, and are, therefore, in progressive discovery, slowly added to relations that have before been traced. In *both* cases, the analysis, necessary for this purpose, is an operation of unquestionable difficulty. But it is surely not less so, in mind, than in matter; nor, when nature exhibits all her wonders to us, in one case, in objects that are separate from us, and foreign; and, in the other, in the intimate phenomena of our own consciousness, can we justly think, that it is of *ourselves* we know the most. On the contrary, strange as it may seem, it is of her *distant* operations, that our knowledge is least imperfect; and we have far less acquaintance with the sway which she exercises in our own mind, than with that by which she guides the course of the most remote planet, in spaces beyond us, which we rather *calculate* than *conceive*. The only science, which, by its simplicity and comprehensiveness, seems to have attained a maturity that leaves little for future inquiry, is not that which relates immediately to man himself, or to the properties of the bodies on his own planet, that are ever acting on his perceptive organs, and essential to his life and enjoyment;

but that which relates to the immense system of the universe, to which the very orb, that supports all the multitudes of his race, is but an atom of dust, and to which himself, as an individual, is as nothing.

> " Could he, whose rules the rapid comet bind,
> Describe or fix one movement of his mind?
> Who saw *its* fires here rise, and there descend,
> Explain his own beginning or his end?
> Go, wondrous creature! mount where Science guides,
> Go, measure earth, weigh air, and state the tides;
> Instruct the planets in what orbs to run,
> Correct old Time, and regulate the Sun;
> Go, soar with Plato to th' empyreal sphere,
> To the first good, first perfect, and first fair;
> Go, teach Eternal Wisdom how to rule—
> Then drop into thyself, and be a fool!" *

That man should know so much of the *universe*, and so very little of *himself*, is, indeed, one of the circumstances, which, in the language of the same poet, *most* strongly characterize him, as the " jest and riddle" of that world, of which he is also no less truly " the glory."

" That the intelligence of any being," to use the words of D'Alembert, " should not pass beyond certain limits—that, in one species of beings, it should be more or less circumscribed, than in another—all this is not surprising, more than that a blade of grass should be less tall than a shrub, or a shrub than an oak. But that the *same* being should be at once arrested by the narrow circle which nature has traced

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* Pope's Essay on Man, Ep. ii. v. 35—39; 19—24; and 29. 30.

around him, and yet constantly reminded, that, beyond these limits, there are objects which he is never to attain—that he should be able to reason, till he loses himself, on the existence and nature of these objects, though condemned to be eternally ignorant of them—that he should have too little sagacity to *resolve* an infinity of questions, which he has yet sagacity enough to *make*—that the principle within us, which thinks, should ask itself in vain, what it is which constitutes its thought, and that this thought, which sees so many things, so *distant*, should yet not be able to see itself, which is so *near*,—*that self*, which it is notwithstanding always striving to see and to know—these are contradictions, which, even in the very pride of our reasoning, cannot fail to surprise and confound us."

All that remains for us, in that impossibility which nature has imposed on us of attaining a more intimate knowledge of the *essence* and *constitution* either of *mind* or of *matter*, is to attend to the phenomena which they present, *analysing* whatever is *complex*, and tracing the *order* of every *sequence*. By attentive reflection on the phenomena themselves, and on all the circumstances which precede or follow them, we shall be able to discover the relations which they mutually bear, and to distinguish their casual coincidence, or succession, from those *invariable* relations which nature has established among them as *causes* and *effects*. This, humble as it may seem, is, as I have said, the true philosophy of man; because it is all of which man is capable. To inquire, as may be thought, more deeply into the *essences* of things,

or the nature of certain supposed *bonds* by which they are connected, is to shew, not that we have *advanced* far in the progress of science, but that we have gone far astray; not that we know *more* than philosophers of humbler views and pretensions, but that we know *less;* since it proves that we are unacquainted with the limits within which nature has bounded our prospect, and have not attained that prime knowledge, which consists in knowing how little can be known.

If the philosophy, not of mind only, but of the universe, is to be found, as Hobbes has boldly said, *within ourselves,*—in the same manner as the perfect statue is to be found in the rude block of the quarry, when all the superfluous mass, that adheres to it, has been removed,—in no respect can it more justly be said to be in our own minds than in this, that it is only by knowing the true extent, and consequently the limits, of our intellectual powers, that we can form any rational system of philosophic investigation. Then, indeed, Philosophy may be truly said, in his strong figurative language, to be Human Reason herself, hovering over all created things, and proclaiming their order, their causes, and effects. "Philosophiam noli credere eam esse, per quam fiunt lapides philosophici, neque illam quam ostentant codices metaphysici; sed Rationem Humanum naturalem per omnes res creatas sedulo volitantem, et de earum ordine, causis, et effectibus, ea quæ vera sunt renuntiantem. Mentis ergo tuæ, et totius mundi filia philosophia in te ipso est; nondum fortasse figurata, sed genitori mundo qualis erat in principio

informi similes. Faciendum ergo tibi est quod faciunt statuarii, qui materiam exculpentes supervacaneam, imaginem non faciunt sed inveniunt."*

After these remarks on physical inquiry in general, and its particular application to our own science, I trust that we shall now proceed to *observe*, and *analyse*, and *arrange* the mental phenomena, with clearer views, both of the *materials* on which we have to operate, and of the nature of the *operations* which we have to perform. We may consider the mind as now lying open before us, presenting to us all its phenomena, but presenting them in *assemblages*, which it is to be our labour to separate and arrange. In this separation and arrangement, there are difficulties, I confess, of no slight kind. But, I trust, that you have the spirit, which delights in overcoming difficulties, and which, even if its most strenuous exertions should fail, delights in *the very strenuousness of the endeavour*. In what *admits* our analysis, and in what *transcends* it, we shall always find much that is truly wonderful *in itself*, and deserving of our profoundest admiration; and, even in the obscurest parts of the great field of mind, though we may see only *dimly*, and must, therefore, be cautious in inquiring, and fearful of pronouncing, we may yet, perhaps, be opening paths that are to *lead* to discovery, and, in the very darkness of our search, may perceive some gleams of that light, which, though now only dawning upon *us*, is to brighten on the inquirers of other ages.

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* Ad Lectorem.—A Note prefixed to the Elementa Philosophiæ. 4to. Amstelod. 1668.

In proceeding to examine and compare the mental phenomena, the first circumstance that strikes us, prior to any attempt to arrange them in classes, is, that the mind which exhibits these *is susceptible of a variety of feelings*, every new feeling being a change of its state; and, indeed, it is by such changes alone that it manifests itself, either in our own consciousness, or in the actions of our fellow men. If it could exist only in *one everlasting* state,—such as now constitutes the feeling of any particular moment,—it is quite superfluous to say, that it could not *reason* upon this state,—for this very reasoning would itself imply the change, which is supposed to be impossible; and as little could this one unchanged and unchangeable feeling be an object of reasoning to others, even if there were any mode of its becoming manifest to them, which there evidently could not be. It is, perhaps, even not too extravagant an assertion of Hobbes, who supposes a mind so constituted as to perceive only one colour, and to perceive this constantly, and affirms, that, in that case, it would be absurd to say that it had any perception at all, being rather, as he expresses it, *stupified* than *seeing*. "Attonitum esse et fortasse aspectare eum, sed stupentem dicerem, *videre* non dicerem; adeo sentire semper idem, et non sentire ad idem recidunt."

Mind, then, *is capable of existing in various states*; an enumeration of the leading classes of which, as I before remarked, is all that constitutes

our definition of it. It is that, we say, which perceives, remembers, compares, grieves, rejoices, loves, hates; and though the terms, whatever they may be, that are used by us, in any such enumeration, may be few, we must not forget, that the terms are mere inventions of our own for the purpose of classification, and that each of them comprehends a variety of feelings, that are as truly different from each other as the classes themselves are different. *Perception* is but a single word; yet, when we consider the number of objects that may act upon our organs of sense, and the number of ways in which their action may be combined, so as to produce one compound effect, different from that which the same objects would produce separately, or in other forms of combination, how many are the feelings which this single word denotes!—*so* many, indeed, that no arithmetical computation is sufficient to measure their infinity.

Amid all this variety of feelings, with whatever rapidity the changes may succeed each other, and however opposite they may seem, we have still the most undoubting belief, that it is the *same individual mind,* which is thus *affected in various ways.* The pleasure, which is felt at one moment, has indeed little apparent relation to the pain that was perhaps felt a few moments before; and the knowledge of a subject, which we possess, after having reflected on it fully, has equally little resemblance to our state of doubt when we began to inquire, or

the total ignorance and indifference which preceded the first doubt that we felt. It is the same individual mind, however, which, in all these instances, is pleased and pained, is ignorant, doubts, reflects, knows. There is something "changed in all, and yet in all the same," which at once *constitutes* the thoughts and emotions of the hour, and yet *outlives* them,—something, which, from the temporary agitations of passion, rises, unaltered and everlasting, like the pyramid, that lifts still the same point to heaven, amid the sands and whirlwinds of the desert.

The consideration of the mind, as *one* substance, capable of existing in a variety of states, according as it is variously affected, and constituting, in these different states, all the complex phenomena of thought and feeling, necessarily involves the consideration of *consciousness*, and of *personal identity*. To the examination of these, accordingly, I now proceed, as essential to all the inquiries and speculations, in which we are afterwards to be engaged; since, whatever powers or susceptibilities we may consider as attributes of the mind, this consideration must always suppose the existence of certain phenomena, of which we are conscious, and the identity of the sentient or thinking principle, in which that consciousness resides, and to which all the varieties of those ever-changing feelings, which form the subjects of our inquiry, are collectively to be referred.

Our first inquiry, then, is into the nature of

CONSCIOUSNESS.

IN the systems of philosophy, which have been most generally prevalent, especially in this part of the Island, consciousness has always been classed as one of the intellectual powers of the mind, differing from its other powers, as these mutually differ from each other. It is accordingly ranked by Dr Reid, as separate and distinct, in his Catalogue of the Intellectual Powers; and he says of it, that "it is an operation of the understanding *of its* own kind, and cannot be logically defined. The objects of it are our present pains, our pleasures, our hopes, our fears, our desires, our doubts, our thoughts of every kind, —in a word, all the passions, and all the actions and operations of our own minds, while they are present." And in various parts of his works, which it would be needless to quote, he alludes to its radical difference from the other powers of the mind, as if it were a point on which there could be no question. To me, however, I must confess, it appears, that this attempt to *double*, as it were, our various feelings, by making them not to *constitute our consciousness*, but *to be the objects of it*, as of a distinct intellectual power, is not a faithful statement of the phenomena of the mind, but is founded, partly on a confusion of thought, and still more on a confusion of language. Sensation is not the *object* of consciousness different from itself, but a *particular sensation*

is the *consciousness of the moment*; as a particular *hope*, or *fear*, or *grief*, or *resentment*, or simple *remembrance*, may be the *actual consciousness of the next moment*. In short, if the mind of man, and all the changes which take place in it, from the first feeling with which life commenced, to the last with which it closes, could be made *visible* to any other thinking being, *a certain series of feelings alone*, that is to say, a certain number of successive states of the mind, would be distinguishable in it, forming, indeed, a variety of sensations, and thoughts, and passions, as momentary *states* of the mind, but all of them existing individually, and successively to each other. To suppose the mind to exist in two different states, in the same moment, is a manifest absurdity. To the whole series of states of the mind, then, whatever the individual momentary successive states may be, I give the name of our *consciousness*, —using that term, not to express any new state additional to the whole series, (for to that, which is already *the whole*, nothing can be added, and the mind, as I have already said, cannot be conceived to exist at once in two different states,) but merely as a short mode of expressing the wide variety of our feelings; in the same manner, as I use any other generic word, for expressing briefly the individual varieties comprehended under it. There are not sensations, thoughts, passions, *and also consciousness*, any more than there is *quadruped* or *animal*, as a separate being, to be added to the wolves, tygers, elephants, and other living creatures, which I include under those terms.

The fallacy of conceiving consciousness to be something different from the feeling, which is said to be *its object*, has arisen, in a great measure, from the use of the personal pronoun *I*, which the conviction of our *identity*, during the various feelings, or temporary consciousnesses of different moments, has led us to employ, as significant of our permanent *self*, of that being, which is conscious, and *variously* conscious, and which continues, after these feelings have ceased, to be the subject of other consciousness, as transient as the former. *I* am *conscious* of a certain feeling, really means, however, no more than this—*I feel in a certain manner*, or, in other words, *my mind exists in that state* which constitutes a certain feeling;—the mere *existence of that feeling*, and not any additional and distinguishable feeling that is to be termed *consciousness*, being all which is essential to the state of my mind, at the particular moment of sensation; for a pleasure, or pain, of which we are not conscious, is a pleasure or pain, that, in reference to us at least, has no existence. But when we say, *I am conscious* of a *particular feeling*, in the usual paraphrastic phraseology of our language, which has no mode of expressing, *in a single word*, the *mere existence* of a feeling, we are apt, from a prejudice of grammar, to separate the sentient *I* and the *feeling* as *different*,—not different, as they really are, *merely in this respect*, that the *feeling* is one momentary and changeable state of the permanent *substance I*, that is, capable of existing also, at other moments, in other states,—but so *radically different*, as to justify our classing the feeling, in the relation

of an *object*, to that sentient principle which we call *I*,—and an object to it, not in retrospect only, as when the feeling is *remembered*, or when it is viewed in relation to other remembered feelings,—but in the very moment of the *primary* sensation itself; as if there could truly be two distinct states of the same mind, at that same moment, one of which states is to be termed *sensation*, and the other different state of the same mind to be termed *consciousness*.

To estimate more accurately the effect, which this reference to self produces, let us imagine a human being to be born with his faculties perfect as in mature life, and let us suppose a sensation to arise for the first time in his mind. For the sake of greater simplicity, let us suppose the sensation to be of a kind as little complex as possible; such, for example, as that which the fragrance of a rose excites. If, immediately after this first sensation, we imagine the sentient principle to be extinguished, what are we to call that feeling, which filled and constituted the brief moment of life? It was a simple sensation, and nothing more; and if only we say, that the sensation has existed,—whether we say, or do not say, that the mind was conscious of the sensation,—we shall convey precisely the same meaning; the *consciousness of the sensation* being, in that case, only a tautological expression of the *sensation itself*. There will be, in this first momentary state, no separation of *self* and the *sensation*,—no little proposition formed in the mind, *I feel*, or *I am conscious of a feeling*; but the *feeling* and the *sentient I* will, for the moment, be the same. It is

this simple feeling, and this alone, which is the whole consciousness of the first moment; and no reference can be made of this to a *self*, which is independent of the temporary *consciousness*; because the knowledge of *self*, as distinct from the particular feeling, implies the remembrance of former feelings,—of feelings, which, together with the present, we ascribe to *one* thinking principle,—recognizing the *principle*, the *self*, the *one*, as the *same*, amid all its transient diversities of consciousness.

Let us now, then, instead of supposing life, as in the former case, to be extinguished immediately after the first sensation, suppose another sensation to be excited, as for instance that which is produced by the sound of a flute. The mind either will be completely absorbed in this new sensation, without any subsequent remembrance,—in which case *the consciousness of the sensation*, as in the case of the fragrance that preceded it, will be only another more paraphrastic expression of the simple *sensation*—or the remembrance of the former feeling will arise. If the remembrance of the former feeling arise, and the two different feelings be considered by the mind at once, it will *now*, by that irresistible law of our nature, which impresses us with the conviction of our identity, conceive the *two* sensations, which it recognizes as different in themselves, to have yet belonged to the *same being*,—that being, to which, when it has the use of language, it gives the name of *self*, and in relation to which it speaks, as often as it uses the pronoun *I*.—The notion of *self*, as the lasting

subject of successive transient feelings, being *now, and not till now,* acquired, through the remembrance of *former* sensations or temporary diversities of consciousness, the mind will often again, when other new sensations may have arisen, go through a similar process, being not merely affected with the particular momentary sensation, but remembering other prior feelings, and identifying it with them, in the general designation of self. In these circumstances the memory of the past will often mingle with and modify the present; and, *now* indeed, to form the verbal proposition, *I am conscious of a particular sensation,*—since the very word *I* implies that this remembrance and identification *has* taken place,—may be allowed to express *something more than the mere existence of the momentary sensation:* for it expresses also that the mind, which now exists in the state of this particular sensation, *has formerly existed in a different state.* There is a remembrance of former feelings, and a belief that the present and the past have been states of one substance. But this belief, or, in other words, this remembrance of former feelings, is so far from being essential to every thought or sensation, that innumerable feelings every moment arise, without any such identification with the past. They are *felt,* however, for this is necessarily implied in their existence; but they exist, *as transient thoughts or sensations only,* and the *consciousness,* which we have of them, in these circumstances, is nothing more, than *the thoughts or sensations themselves,* which could not be *thoughts* or *sensations* if they were not *felt.*

In the greater number of our successions of momentary feelings, then, when *no* reference is made to former states of the mind, the consciousness is obviously nothing more than the simple momentary feeling itself as it begins and ceases; and *when* there *is* a reference to former states of the mind, we discover on analysis only a remembrance, like all our other remembrances, and a feeling of common relation of the past and the present affection of the mind to one permanent subject. It is the belief of our continued identity which involves this particular feeling of relation of past and present feelings; and consciousness, in this sense of the term, is only a word expressive of that belief.

That the fragrance of a rose, the sound of a flute, and in general all the other objects of sense, might have excited *precisely the same immediate sensations* as at present, Doctor Reid admits, *though* the belief of our personal identity had *not* been impressed upon us; for he ascribes this belief to an *instinctive principle only*, and acknowledges, that there is nothing *in our sensations themselves*, from which any such inference could be drawn by reason. If, then, this instinctive belief of identity had *not* been, as at present, a natural law of human thought,—operating irresistibly on the remembrance of our different feelings, we should have had no notion of *self*, of *me*, the sentient and thinking being, who exists at the present moment, and who existed before the present moment:—and what, then, would have been the consciousness, accompanying, and different from, our sensations, when they merely flashed along

the mind and vanished? The most zealous defender of consciousness, as a separate intellectual power, must surely admit, that, *in such circumstances*, it would have been nothing more than *sensation* itself. It is the belief of our *identity* only, which gives us the notion of *self*, as the subject of *various* feelings, and it is the notion of *self*, as the *subject* of *various former feelings*, which leads us to regard the consciousness of the moment, as different from the sensation of the moment; because it suggests to us those former feelings, which truly were different from it, or at least that *subject mind*, which unquestionably existed before the present sensation.

If it be said, that the faculty of consciousness is nothing more than this reference to the past, and consequent belief of identity, we may, in that case, very safely admit its existence; though the classification of it, as a peculiar *intellectual power*, would in that case be a most singular anomaly in arrangement, and would involve a very absurd, or at least a very *awkward* use of a term. To assert this signification of it, however, would be to admit every thing for which I have contended. But it certainly is not the sense, which has been attached to it by philosophers; and indeed, in *this* sense, *consciousness*, instead of having for its objects, as Doctor Reid says, *all* "our present pains, our pleasures, our hopes, our fears, our desires, our doubts, our thoughts of every kind; in a word, all the passions, and all the actions and operations of our own mind, while they are present," would be limited to the comparatively *few*, of which the consideration of our personal iden-

tity forms a part. In far the greater number of our feelings, as I have already said, the sensation dies away, almost in the moment,—not, indeed, without being enjoyed or suffered, but without any reference to self, as the subject of various feelings, or remembrance of any *prior* state of mind, as distinct from the present. The belief of our identity, is surely not the only belief that arises from an instinctive principle; and if *its* existence *entitle us*, in our systematic arrangements, *to the possession of a new intellectual power*, every *other* belief that arises instinctively from a principle of our constitution, must give us a similar title to enlarge the catalogue of our faculties. The never-failing and instant faith, by which we expect, without the slightest doubt of the similarity of the future, that events will continue to *follow* each other, in the same order as at present,—that bodies will fall to the ground, fire burn, food satisfy the craving of our appetite—that immediate intuitive principle of belief, on which all our foresight depends, and according to which we regulate our whole conduct in providing for the future,—should certainly, in that case, be ascribed by us to some peculiar intellectual power, for which it would be easy to invent a name. It is not, by any inference of our reason, we believe, that the sound of a flute which preceded the fragrance of a rose, and the fragrance of a rose which followed the sound of a flute, excited sensations that were states of the same identical mind; for there is nothing, in either of the *separate* sensations, or *in both together*, from which such an *inference* can be drawn; and yet, notwith-

standing the impossibility of inferring it, we believe this, at least as strongly, as we believe any of the conclusions of our reasoning. In like manner, it is not by any inference of reason we believe, that fire will warm us to-morrow, as it has warmed us to-day; for there is nothing, in the fire of to-day, or in the sensation of warmth, considered as a mere sequence of it, from which the succession of a similar sensation to the fire of to-morrow can be inferred; yet we also rely on this future sequence, at least as strongly, as we believe any of the conclusions of our reasoning. In both cases the parallel is complete; and in both, the evidence of a *particular intellectual faculty* must consequently be alike,—*or* in *neither* is there sufficient evidence of such a power.

There is, indeed, one other sense, in which we often talk of our *consciousness of a feeling*, and a sense, in which, it must be allowed, that the consciousness *is not precisely the same as the feeling itself.* This is, when we speak of a feeling, not actually existing at present, but *past*—as when we say, that we are conscious of having seen, or heard, or done something. Such a use of the term, however, is pardonable only in the privileged looseness and inaccuracy of familiar conversation; the *consciousness*, in this case, being precisely synonimous with *remembrance* or *memory*, and not a power, different from the remembrance. The *remembrance* of the feeling, and the vivid *feeling* itself, indeed, are different. But the *remembrance*, and the *consciousness of the remembrance*, are the same—as the *consciousness of a sensation*, and the *sensation*, are the

same; and to be *conscious* that we have seen or spoken to any one, is only to *remember* that we have seen or spoken to him.

Much of this very confusion with respect to memory, however, I have no doubt, has been always involved in the assertion of consciousness as a peculiar and distinct power of the mind. When we think of feelings *long past*, it is impossible for us not to be aware that our mind is then truly retrospective; and *memory* seems to us sufficient to account for the whole. But when the retrospect is of *very recent* feelings—of feelings, perhaps, that existed as distinct states of the mind, the very moment before our retrospect began, the short interval is forgotten, and we think that the primary feeling, and our consideration of the feeling, are strictly simultaneous. We have a sensation;—we look instantly back on that sensation,—such is consciousness, as distinguished from the feeling that is said to be its object. When it is anything more than the sensation, thought, or emotion, of which we are said to be conscious, it is a brief and rapid retrospect. Its object is not a *present* feeling, but a *past* feeling, as truly as when we look back, not on the moment immediately preceding, but on some distant event or emotion of our boyhood.

After thus distinguishing all that is truly *present* in consciousness, from *common remembrance*, I surely need not undertake, at any length, to distinguish it from that peculiar species of remembrance, which goes under the name of *conscience;* though their similar etymology may have a slight tendency to mislead.

Conscience is our *moral memory*—it is the *memory of the heart*, if I may apply to it a phrase, which, in its original application, was much more happily employed, by one of the deaf and dumb pupils of the Abbe Sicard, who, on being asked what he understood by the word *gratitude*, wrote down immediately, "*Gratitude is the memory of the heart.*"

The power of conscience does, indeed, what consciousness does *not*. It truly *doubles* all our feelings, when they have been such as virtue inspired; "Hoc est vivere *bis*, vita posse priore frui;" and it multiplies them in a much more fearful proportion, when they have been of an opposite kind—arresting, as it were, every moment of guilt, which, of itself, would have passed away, as fugitive as our other moments, and suspending them for ever before our eyes, in fixed and terrifying reality. "Prima et maxima peccantium est pæna," says Seneca, "*peccasse*; nec ullum scelus, illud fortuna exornet muneribus suis, licet tueatur ac vindicet, *impunitum* est, quoniam sceleris in scelere supplicium est." * "The first and the greatest punishment of *guilt*, is *to have* been guilty; nor can any crime, though fortune should adorn it with all her most lavish bounty, as if protecting and vindicating it, pass truly unpunished; because the punishment of the base or atrocious deed, is in the very baseness or atrocity of the deed itself." But this species of memory, which we denominate *conscience*, and, indeed, every spe-

* Epist. 97.

cies of *memory*, which must necessarily have for its object *the past*, is essentially different from the consciousness which we have been considering, that, in its very definition, is limited to *present* feelings, and of which, if we really had such an intellectual power, our moral conscience would, in Dr Reid's sense of the term, be an *object* rather than a part.

Consciousness, then, I conclude, in its simplest acceptation, when it is understood as regarding the present only, is no *distinct power* of the mind, or name of a distinct class of feelings, but is only a *general term for all our feelings, of whatever species these may be*,—sensations, thoughts, desires;—in short, *all* those *states* or *affections of mind*, in which the *phenomena of mind* consist; and when it expresses more than this, it is only the remembrance of some former state of the mind, and a feeling of the relation of the past and the present as states of one sentient substance. The term is very conveniently used for the purpose of abbreviation, when we speak of the whole variety of our feelings, in the same manner as any other general term is used, to express briefly the multitude of individuals that agree in possessing some common property of which we speak; when the enumeration of these, by description and name, would be as wearisome to the patience, as it would be oppressive to the memory. But still, when we speak of the *evidence of consciousness*, we mean nothing more, than the evidence implied in the mere existence of our sensations, thoughts, desires,—which is utterly impossible for us to believe to be and not to be; or, in other words,

impossible for us *to feel* and *not to feel* at the same moment. This precise limitation of the term, I trust, you will keep constantly in mind in the course of our future speculations.

LECTURE XII.

ON CONSCIOUSNESS, CONTINUED,—ON MENTAL IDENTITY,—IDENTITY IRRECONCILABLE WITH THE DOCTRINE OF MATERIALISM,—DIFFERENCE BETWEEN PERSONAL IDENTITY AND MENTAL IDENTITY,—OBJECTIONS TO THE DOCTRINE OF MENTAL IDENTITY STATED.

In my last Lecture, Gentlemen, I brought to a conclusion my remarks on the *nature* and *objects* of *Physical Inquiry*,—the clear understanding of which seemed, to me, essentially necessary before we could enter, with any prospect of success, on the physiological investigation of the Mind.

We then *opened our eyes*, as it were, on the *great field of thought and passion*, and on all the infinite variety of feelings, which, in assemblages more or less complex, and in colours more or less brilliant or obscure, it is every moment presenting to our internal glance. The very attempt to arrange these transient feelings as *phenomena of the mind*, however, implies evidently some consideration of the nature of that varied *consciousness* in which they consist, and of the *identity of the permanent substance*, as *states* of *which* we arrange them. My last Lecture, therefore, was devoted to this primary consideration of *consciousness*,—which we found reason to regard, not as *any separate and peculiar faculty of the*

mind, of which our various feelings are, to use Dr Reid's expression, *objects*, and which is, therefore, to be *added*, in every instance, to the separate *pleasures, pains, perceptions, remembrances, passions*, that constitute the momentary states of the mind,—but merely as a short general term, expressive of *all these momentary states* in reference to the *permanent subject mind*. The sensation of fragrance, for example, is the consciousness of one moment, as the remembrance of that *sensation*, or some other sensation, is, perhaps, the consciousness of the succeeding moment;—the mind, at every moment, existing in *one precise state*, which, as one state, can be accurately denoted only by one precise name, or by names that are synonimous, not by names that are significant of total diversity.

All which we know, or can be supposed to know, of the mind, indeed, is a certain *series* of these *states* or feelings that have succeeded each other, more or less rapidly, since life began; the sensation, thought, emotion, of the moment being *one* of those states, and the supposed *consciousness of* the state being only the state itself, whatever it may be, in which the mind exists at that particular moment; since it would be manifestly *absurd* to suppose the same indivisible mind to exist at the very same moment in two separate states, *one* of sensation, and *one* of consciousness. It is not simply because we *feel*, but because we *remember* some *prior feeling*, and have formed a notion of the *mind* as the *permanent subject* of different feeling, that we conceive the proposition, "*I* am *conscious* of a *sensation*," to express

more than the simple existence of the sensation itself; since it expresses, too, a reference of this to the same mind which had formerly been recognised as the subject of other feelings. There is a *remembrance* of some former feeling, and a reference of the present feeling to the same subject; and this mere remembrance, and the intuitive belief of identity which accompanies remembrance, are all that philosophers, by defective analyses, and a little confusion of language and thought, have asserted to be the result of a peculiar mental faculty, under the name of consciousness;—though consciousness, in this sense, far from embracing all the varieties of feeling,—that, in the greater number of instances, begin and cease, without any accompanying thought of that permanent substance to which the transient feeling is referable,—must be limited to the comparatively few, in which such a *reference* to *self* is made.

Consciousness, in short, whenever it is conceived to express more than the present feeling, or present momentary state of the mind, whatever that may be, which is said to be the *object* of *consciousness*,—as if it were at once something different at every moment from the present state or feeling of the mind, and yet the very state in which the mind is at every moment supposed to exist,—is a retrospect of some *past* feeling, with that belief of a common relation of the past and present feeling to one subject mind, which is involved in the very notion, or rather constitutes the very notion, of personal identity,—and all which distinguishes this rapid retrospect from any of the other retrospects, which we class as *remem-*

brances, and ascribe to *memory* as their source, is the mere briefness of the interval between the feeling that is remembered, and the reflective glance which seems to be immediately retrospective. A feeling of some kind has arisen, and we look instantly back upon that feeling; but a *remembrance* is surely still the same in nature, and arises from the same principle of the mental constitution, whether the interval which precedes it be that of a moment, or of many hours, or years.

I now then proceed, after these remarks on our consciousness *as momentary*, to a most important inquiry, which arises necessarily from the consideration of the successions of our momentary consciousness, and must be considered as involved in all our attempts to arrange them,—the inquiry into the *Identity* of the Mind, as truly *one* and *permanent*, amid all the variety of its fugitive affections.

In our examination of this very wonderful coincidence of sameness and diversity, I shall confine my remarks to the phenomena which are purely *mental*, omitting the objections drawn from the daily waste and daily aliment of our *corporeal* part, the whole force of which objection may be admitted, without any scruple, by those who contend for the identity *only of the thinking principle*; since the individuality of *this* would be as little destroyed, though every particle of *the body* were completely changed, as the individuality of the body itself would be destroyed, by a change of the mere garments that invest it. The manner in which the mind is united

to a system of particles which are in a perpetual state of flux, is, indeed, more than we can ever hope to be able to explain; though it is really not *more* inexplicable, than its union to such a system of particles would be, *though* they were to continue for ever unchanged.

I may remark, however, by the way, that though the constant state of flux of the *corporeal particles* furnishes no argument against the identity of *the principle which feels and thinks*, if feeling and thought be states of a substance, that is essentially distinct from these *changing particles*, the *unity and identity* of *this* principle, amid all the corpuscular changes,—*if* it can truly be proved to be identical,—furnish a very strong argument, in disproof of those systems which consider thought and feeling as the result of material organization. Indeed, the attempts which have been seriously made by materialists to obviate this difficulty, involve, in every respect, as much absurdity, though certainly not so much pleasantry, at least so much *intentional* pleasantry, as the demonstrations, which the Society of Freethinkers communicated to Martinus Scriblerus, in their letter of greeting and invitation. The arguments, which they are represented as urging in this admirable letter, ludicrous as they may seem, are truly as strong, at least, as those of which they are a parody; and indeed, in this case, where both are so like, a very little occasional change of expression is all which is necessary, to convert the grave ratiocination into the parody, and the parody into the grave ratiocination.

"The parts (say they) of an animal body," stating the objection which they profess to answer, "are perpetually changed, and the fluids which seem to be the subject of consciousness, are in a perpetual circulation; so that the same individual particles do not remain in the brain; from whence it will follow, that the idea of individual consciousness must be constantly translated from one particle of matter to another, whereby the particle A, for example, must not only be conscious, but conscious that it is the same being with the particle B that went before.

"We answer, this is only a fallacy of the imagination, and is to be understood in no other sense than that maxim of the English law, that the *king never dies*. This power of thinking, self-moving, and governing the whole machine, is communicated from every particle to its immediate successor, who, as soon as he is gone, immediately takes upon him the government, which still preserves the unity of the whole system.

"They make a great noise about this individuality, how a man is conscious to himself that he is the same individual he was twenty years ago, notwithstanding the flux state of the particles of matter that compose his body. We think this is capable of a very plain answer, and may be easily illustrated by a familiar example.

"Sir John Cutler had a pair of black worsted stockings, which his maid darned so often with silk, that they became at last a pair of silk stockings. Now supposing those stockings of Sir John's endued with some degree of consciousness at every particular

darning, they would have been sensible, that they were the same individual pair of stockings both before and after the darning; and this sensation would have continued in them through all the succession of darnings; and yet after the last of all, there was not perhaps one thread left of the first pair of stockings; but they were grown to be silk stockings, as was said before.

"And whereas it is affirmed, that every animal is conscious of some individual self-moving, self-determining principle; it is answered, that, as in a House of Commons all things are determined by a *majority*, so it is in every animal system. As that which determines the house is said to be the reason of the whole assembly; it is no otherwise with thinking beings, who are determined by the greater force of several particles, which, like so many unthinking members, compose one thinking system."*

The *identity*, which we are to consider, is, as I have already said, *the identity only of the principle which feels and thinks*, without regard to the changeable state of the particles of the *brain*, or of the body in general. This unity and permanence of the principle, which thinks, if we had still to invent a phrase, I would rather call *mental* identity, than *personal* identity, though the latter phrase may now be considered as almost fixed by the general use of philosophers. On no system can there be this absolute identity, unless as strictly mental; for, if we

* Mart. Scrib. chap. vii.—Pope's Works, *Ed.* 1757, v. vii. p. 82—84.

adopt the system of materialism, we must reject the *absolute* lasting identity of the thinking principle altogether; and if we do not adopt that system, it is in the *mind alone* that we must conceive the identity to subsist. The *person*, in the common and familiar meaning of the term, though *involving* the mind, is yet more than the mere mind; and, by those, at least, who are not conversant with the writings of philosophers on the subject, *sameness* of *person* would be understood as not *mental only*, but as combining *with the absolute identity of the mind, some sort* of identity of the *body* also; though, it must be confessed, that, in its application to the body, the term *identity* is not used with the same strictness, as in its application to the mind; the bodily identity being not absolute, but admitting of *considerable*, and ultimately, perhaps, even of *total*, change, *provided only the change be so gradual, as not* to be inconsistent with *apparent continuity of existence*. Still, however, *identity of person*, at least in the popular notion of it, is something more than identity of mind.

"All mankind," says Dr Reid, "place their personality in something, that cannot be divided or consist of parts. A part of a person is a manifest absurdity.

"When a man loses his estate, his health, his strength, he is still the same person, and has lost nothing of his personality. If he has a leg or an arm cut off, he is the same person he was before. The amputated member is no part of his person, otherwise it would have a right to a part of his estate,

and be liable for a part of his engagements; it would be entitled to a share of his merit and demerit, which is manifestly absurd. A person is something indivisible, and is what Leibnitz calls a monad."*

That all mankind place their personality in something, which cannot be divided into two persons, or into *halves* or *quarters* of a person, is true; because the mind itself is indivisible, and the presence of this one indivisible mind is essential to personality. But, though essential to personality in man, mind is not all, in the popular sense of the word at least, which this comprehends. Thus, if, according to the system of metempsychosis, we were to suppose the mind, which animates any of our friends, to be the same mind, which animated Homer or Plato,—though we should have no scruple, in asserting the identity of the mind itself, in this corporeal transmigration,—there is no one, I conceive, who would think himself justifiable, in point of accuracy, in saying of Plato and his friend, that they were *as exactly, in every respect, the same person*, as if no *metempsychosis* whatever had intervened. It does not follow from this, as Dr Reid very strangely supposes, that a leg or arm, if it had any relation to our personality, would, after amputation, be liable to a part of our engagements, or be entitled to a share of our merit or demerit; for the *engagement*, and the *moral merit* or *demerit*, belong not to the *body*, but to the *mind*, which we believe to continue *precisely*

* Essays on the Intellectual Powers, Essay III. chap. iv.—v. 1. p. 341. *Edit. Ed.* 1808.

the same, after the amputation, as before it. This, however, is a question merely as to the comparative propriety of a term, and as such, therefore, it is unnecessary to dwell upon it. It is of much more importance, to proceed to the consideration of the *actual identity* of the mind, *whether* we term it simply *mental* or *personal* identity.

"That there is *something* undoubtedly which *thinks*," says Lord Shaftesbury, "our very doubt itself and scrupulous thought evinces. But in *what subject* that thought resides, and how *that* subject is continued *one and the same*, so as to answer constantly to the supposed train of thoughts or reflections, which seem to run so harmoniously through a long course of life, with the *same* relation still to one *single* and *self-same person*, this is not a matter so easily or hastily decided, by those who are nice self-examiners, or searchers after *truth* and *certainty*.

"'Twill not, in this respect, be sufficient for us to use the seeming *logic* of a famous* modern, and say, '*We think*; therefore *we are*.' Which is a notably invented saying, after the model of that like philosophical proposition, that '*What is, is*.' Miraculously argued! If '*I am, I am*.' Nothing more certain! For the *ego* or *I* being established in the first part of the proposition, the *ergo*, no doubt, must hold it good in the latter. But the question is, 'What constitutes the *we* or *I*?' And, 'Whether the I of this instant be the same with that of any instant preceding, or to come.' For we have nothing

* Monsieur Des Cartes. *Shaftesb.*

but *memory* to warrant us, and memory may be false. We may believe we have thought and reflected thus or thus; but we may be mistaken. We may be conscious of that, as *truth*, which perhaps was no more than *dream*; and we may be conscious of that as a *past* dream, which perhaps was never before so much as dreamt of.

"This is what *metaphysicians* mean, when they say, 'That *identity* can be proved only by *consciousness*; but that consciousness withal may be as well false as real, in respect of what is past.' So that the same successional *we* or *I* must remain still, on this account, undecided.

"To the force of this reasoning I confess I must so far submit, as to declare that for my own part, I take my being *upon trust*. Let others philosophize as they are able; I shall admire their strength, when, upon this topic, they have refuted what able *metaphysicians* object, and *Pyrrhonists* plead in their own behalf.

"Meanwhile, there is no impediment, hinderance, or suspension of *action*, on account of these wonderfully refined *speculations*. Argument and debate go on still. Conduct is settled. Rules and measures are given out, and received. Nor do we scruple to act as resolutely upon the mere supposition that *we are*, as if we had effectually proved it a thousand times, to the full satisfaction of our *metaphysical* or *pyrrhonean* antagonist."*

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* Shaftesbury's Characteristics, vol. iii. p. 172—174. *Edit.* 1745.

In stating the objections, that may be urged against our mental identity, by such metaphysical or pyrrhonean antagonists, as those of whom Lord Shaftesbury speaks, I shall endeavour to exhibit the argument in as strong a light as possible, and in a manner that appears to me, in some measure, new. It is surely unnecessary for me to warn you, that the argument, however specious, is a sophistical one; and the nature of the peculiar sophistry which it involves shall be afterwards pointed out to you. But I conceive it to be most important, in teaching you to reflect for yourselves,—by far the most important lesson which you can be taught,—that you should be accustomed to consider the force of objections that may be urged, as clearly by the force of that surer evidence which they oppose,—and that even *sophistry* itself, when it is to be exhibited and confuted, should, therefore, always be exhibited *fairly*. We pay truth a very easy homage, when we content ourselves with despising her adversaries. The duty which we owe to her is of a more manly kind. It is to gird ourselves for the battle,—to fit us for overcoming those adversaries, whenever they shall dare to present themselves in array; and this we cannot do, with absolute confidence, unless we know well the sort of arms which they may use, strong or feeble as those arms may be. I can have no fear, that any argument of this kind, in whatever manner it may be stated, can have the slightest influence on your conviction; because it is directly opposed by a principle of our nature, which is paramount to all

reasoning. We believe our identity, as one mind, in our feelings of to-day, and our feelings of yesterday, as indubitably as we believe that the fire, which burned us yesterday, would, in the same circumstances, burn us to-day,—not from reasoning, but from a principle of instant and irresistible belief, such as gives to reasoning itself all its validity. As Lord Shaftesbury justly says, "We act as resolutely, upon the mere supposition that *we are*, as if we had effectually proved it a thousand times."

To identity, it may be said, it is necessary that *the qualities be the same*. That, of which the *qualities* are *different*, cannot be *the same;* and the only mode of discovering whether a substance have the *same* or *different* qualities, is to observe, how it *affects* and *is affected by* other substances. It is recognized by us as the *same*, or, at least, as *perfectly similar*, when, in two corresponding series of changes, the same substances affect *it* in the same manner, and *it* affects, in the same manner, the same substances; and when either the same substances do *not* affect it in the same manner, or *it* does not affect, in the same manner, the same substances, we have no hesitation in considering it *as different*. Thus, if a white substance, resembling exactly, in every external appearance, a lump of sugar, do not *melt* when exposed to the action of boiling water, we do not regard it as *sugar*, because the water does not act on it as we have uniformly known it to act on that substance; or if the same white lump, in every other respect resembling sugar, affect our taste as *bitter* or *acrid* rather than *sweet*, we immediately, in like

manner, cease to consider it as *sugar* because it does not act upon our nerves of taste in the same manner as sugar acts upon them. The *complete similarity*, in other respects, is far from sufficient to make us alter our judgment; a single circumstance of manifest difference, in its mode either of acting upon other substances, or of being acted upon by them, being sufficient to destroy the effect of a thousand manifest resemblances.

Let this *test of identity*, then, it may be said, be applied to the *mind*, at *different periods*, if the test be allowed to be a just one; and let it be seen, *whether*, in the series of changes in which it acts or is acted upon, the phenomena precisely correspond in every case. If the same objects do *not* act upon it in the same manner, *it must then be different*, according to the very definition to which we are supposed to have assented.—You, of course, understand, that I am at present only assuming the character of an objector, and that I state an argument, the principle of which you will afterwards find to be false.

When we compare the listless inactivity of the infant, slumbering, from the moment at which he takes his milky food, to the moment at which he awakes to require it again, with the restless energies of that mighty being which he is to become, in his maturer years, pouring truth after truth in rapid and dazzling profusion upon the world, or grasping in his single hand the destiny of empires, how few are the circumstances of resemblance which we can trace, of all that intelligence which is afterwards to be displayed; how little *more* is seen, than

what serves to give feeble motion to *the mere machinery of life*. What prophetic eye can venture to look beyond the period of distinct utterance, and discern that variety of character by which *even boyhood* is marked, far less the intellectual and moral growth of the years that follow—the genius, before whose quick glance the errors and prejudices, which all the ages and nations of mankind have received as truths, are to disappear—the political wisdom, with which, in his calm and silent meditations, he is to afford more security to his country than could be given to it by a thousand armies, and which, with a single thought, is to spread protection and happiness to the most distant lands—or that ferocious ambition, with which, in unfortunate circumstances of power, he is perhaps to burst the whole frame of civil society, and to stamp, through every age, the deep and dark impression of his existence, in the same manner as he leaves on the earth which he has desolated, the track of his sanguinary footsteps. The cradle has its equality almost as the grave. Talents, imbecilities, virtues, vices, slumber in it together, undistinguished; and it is well that it is so, since, to those who are most interested in the preservation of a life that would be helpless but for their aid, it leaves those delightful illusions which more than repay their anxiety and fatigue, and allows them to hope, for a *single being*, *every thing* which it is possible for the *race of man* to become. If clearer presages of the future mind were then discoverable, how large a portion of human happiness would be destroyed *by this single circumstance!* What plea-

sure could the mother feel, in her most delightful of offices, if she knew that she was nursing into strength, powers, which were to be exerted for the misery of that great or narrow circle, in which they were destined to move, and which to her were to be a source, not of blessing, but of grief, and shame, and despair!

> "These shall the fury passions tear,
> The vultures of the mind,"

says Gray, on thinking of a group of happy children;

> "For see, how all around them wait,
> The ministers of human fate,
> And black Misfortune's baleful train;
> Oh! shew them, where in ambush stand,
> To seize their prey, the murd'rous band!
> Oh! tell them, they are men!"*

To tell them they are men, though they were capable of understanding it, even in this sense of the word, would not communicate information so melancholy or so astonishing to *themselves*, as, by breaking too soon that dream of expectation, which is not to last for ever, but which fulfills the benevolent purpose of nature while it lasts, it would communicate to the parent who watches over them, and who sees in them only those pure virtues, and that happiness as pure, which are perhaps more than the nature of man admits, and which, at least in the case before her, are never to be realized.

* Ode III.

Is the mind then, in infancy, and in mature life, precisely the same, when, in the one case, so many *prominent diversities* of character force themselves upon the view, and, in the other case, so little appears to distinguish the future ornament of mankind, from him who is afterwards

"To eat his glutton meal with greedy haste,
Nor know the hand which feeds him?"

If we apply the test of identity, do we find that the same objects, in these different periods, act upon the mind in exactly the same manner; and are its own feelings, in the successive trains, intellectual and moral, of which they form a part, attended with consequents exactly the same?

Every age,—if we may speak of *many* ages, in the few years of human life,—seems to be marked with a distinct character. Each has its peculiar objects, that excite lively affections; and in each, exertion is excited by affections, which, in other periods, terminate, without inducing active desire. The boy finds a world in less space than that which bounds his visible horizon; he wanders over his range of field, and exhausts his strength in pursuit of objects, which, in the years that follow, are seen only to be neglected; while, *to him*, the objects that are afterwards to absorb his whole soul, are as indifferent as the objects of his present passions are destined then to appear.

In the progress of life, though we are often gratified with the prospect of benevolence increasing as its objects increase, and of powers rising over the greatness of their past attainments, this gratifica-

tion is not always ours. Not slight changes of character only appear, which require our attentive investigation to trace them, but, in innumerable cases, complete and striking contrasts press, of themselves, upon view. How many melancholy opportunities must every one have had in witnessing the progress of intellectual decay, and the coldness that steals upon the once benevolent heart! We quit our country, perhaps, at an early period of life, and, after an absence of many years, we return, with all the remembrances of past pleasure, which grow more tender as we approach their objects. We eagerly seek *him*, to whose paternal voice we have been accustomed to listen, with the same reverence as if its predictions had possessed *oracular* certainty,—who first *led* us into knowledge, and whose image has been constantly joined in our mind, with all that *veneration* which does not forbid *love*. We find him sunk, perhaps, in the imbecility of idiotism, unable to recognize us—ignorant alike of the past and of the future, and living only in the sensibility of animal gratification. We seek the favourite companion of our childhood, whose gentleness of heart we have often witnessed, when we have wept together over the same ballad, or in the thousand little incidents that called forth our mutual compassion, in those years when compassion requires so little to call it forth. We find him hardened into man, meeting us scarcely with the cold hypocrisy of dissembled friendship—in his general relations to the world, careless of the misery which *he* is not to feel—and, if he ever think of the happiness of others, seeking it as an instrument,

not as an end? When we thus observe all that made us *one*, and gave an heroic interest even to our childish adventures, absorbed in the chillness of selfish enjoyment, do we truly recognize in him the same *unaltered* friend, from whom we were accustomed to regret our separation, and do we use only a metaphor of little meaning, when we say of him, that he is become *a different person*, and that his mind and character are *changed?* In what does the identity consist? The same objects no longer *act* upon him in the same manner; the same views of things are no longer followed by similar approbation or disapprobation, grief, joy, admiration, disgust; and if we affirm *that substance* to be, in the strictest sense of identity, the *same* on which, in two corresponding series of phenomena, the same objects act differently, while itself also acts differently on the same objects; in short, in which the antecedents being the same, the consequents are different, and, the consequents being the same, the antecedents are different, what definition of *absolute diversity* can we give, with which this affirmation of absolute identity may not be equally consistent?

> "Behold the child, by nature's kindly law,
> Pleas'd with a rattle, tickled with a straw;
> Some livelier plaything gives his youth delight,
> A little louder, but as empty quite;
> Scarfs, garters, gold, amuse his riper stage;
> And beads and prayer-books are the toys of age.
> Pleas'd with this bauble still, as that before;
> Till, tir'd, he sleeps,—and life's poor play is o'er."*

* Pope's Essay on Man, Ep. II. v. 275—282.

The supposed *test of identity*, when applied to the mind in these cases, completely fails. It neither *affects*, nor *is affected*, in the same manner, in the same circumstances. It, therefore, if the test be a just one, is *not* the same identical mind.

This argument against the identity of the mind, drawn from the occasional striking contrasts of character in the same individual at different periods of life, or when, by great changes of fortune, he may have been placed suddenly in circumstances remarkably different, *must*, in some degree, have forced itself upon every one who has been at all accustomed to reflect; and yet, in no one instance, I may safely say, can it have produced conviction even for a moment. I have stated it to you, without attempting to lessen its force by any allusion to the fallacy on which it is founded; because the nature of this fallacy is afterwards to be fully considered by us.

There is another argument that may be urged against the identity of the sentient and thinking principle, which has at least equal semblance of force, though it does not occur so readily, because it does not proceed on those *general and lasting changes of character* with which every one must be struck, but on the passing phenomena of the moment, which are not inconsistent with a continuance of the *same general character*, and which, as common to all mankind, and forming, indeed, the whole customary and familiar series of our thoughts and emotions, excite no astonishment when we look back on them in the order of their succession.

The mere diversity of our feelings at different mo-

ments, it may be said, is of itself incompatible with the *strict and absolute unity* which is supposed to belong to the thinking principle. If joy and sorrow, such as every one has felt, be different, that which is joyful, and that which is sorrowful, cannot be precisely the same. On the supposition of *complete unity and permanence* of the thinking principle, nothing is *added* to it, nothing is *taken away* from it; and, as it has no *parts*, no internal change of elementary composition can take place in it. But *that* to which nothing is added, from which nothing is taken away, and which has no parts to vary their own relative positions and affinities, is so strictly the same, it may be said, that it would surely be absurd to predicate of it any diversity whatever. *Joy* and *sorrow* imply an unquestionable diversity *of some kind;* and if this diversity cannot be predicated of that substance which is precisely the same, without addition, subtraction, or any internal change of composition whatever, that which is joyful, and that which is sorrowful, cannot have *absolute identity;* or if we affirm, that a diversity, so striking as to form an absolute *contrast*, is yet not inconsistent with complete and permanent unity and identity, we may, in like manner, affirm, that a substance which is hard, heavy, blue, transparent,—which unites with acids, not with alkalies,—and which is volatilizable at a low temperature,—is precisely the same substance as that, which is *soft, light, green, opaque*,—which unites with alkalies, not with acids, —and which is absolutely infusible and *fixed* in the highest temperature to which we can expose it.

I have thus endeavoured to place, *in the strongest possible light*, the most imposing arguments which I can conceive to be urged against *the permanent identity of the sentient and thinking principle*, that, in combating *even Sophistry itself*, you may learn, as I have said, to combat with it on equal ground, and assume no advantage but that irresistible advantage which Truth must always afford to him who is the combatant of Error.

The positive evidence of the identity of the mind I shall proceed to consider in my next Lecture.

LECTURE XIII.

ON THE DIRECT EVIDENCE OF MENTAL IDENTITY; AND OBJECTIONS ANSWERED.

My last Lecture, Gentlemen, was employed in considering the great question of the Identity of the Mind, as *one* and *permanent*, amid all the infinite variety of our feelings; and particularly, in stating the two most forcible objections, which I can *imagine* to be urged against this identity,—*one* founded on the striking contrasts, intellectual and moral, which the same mind exhibits in different periods of life, and in different circumstances of fortune,—the *other*, more abstract, and, therefore, less obvious, but not less forcible, founded on the mere diversity of our temporary feelings, as *itself inconsistent with identity*, at least with that *strict and absolute identity*, to which, as in the case of the *mind*, nothing can have been added,—from which nothing can have been taken away,—and which, by its very nature, as simple and indivisible, must have been incapable of any *elementary change*.

Since the exposure of the fallacy on which these objections are founded, would, however, afford only a sort of *negative* evidence of that great truth which they oppose, it will be of advantage, before entering on an examination of the objections themselves, to state, in the first place, the nature of that *positive* evidence, which does not, indeed, *lead* us to the belief of the unity and permanence of our spiritual being, by that slow process which is denominated reasoning, but constitutes to us, primarily and directly, an impossibility of disbelieving it. I do this the more readily, from the opportunity which it gives of making you acquainted with the paramount importance of those *principles of intuitive belief*, which are essential to philosophy in all its forms, as they are physically essential, indeed, to the very preservation of our animal existence; and which the rash and unphilosophic extension of them by one class of philosophers, and the equally unphilosophic misapprehension of them by other writers who controverted them, have rendered more necessary, than it would otherwise have been, to state to you with precision.

Of these *first truths*, as they have been termed, the subject, which we are at present considering, affords one of the most striking examples. The belief of our identity is not the result of any series of propositions, but arises immediately, in certain circumstances, from a principle of thought, as essential to the very nature of the mind, as its powers of *perception* or *memory*, or as the power of reasoning itself, on the essential validity of which, and consequently on the intuitive belief of some *first truth* on which

it is founded, every objection to the force of these very truths themselves must ultimately rest. To *object* is to *argue;* and to argue is to assert the *validity* of *argument,* and, therefore, of the *primary* evidence, from which the evidence of each succeeding proposition of the argument flows. To object to the authority of such primary intuitive belief, would thus be to reason against reason,—to affirm and deny at the same moment,—and to own that the very arguments which we urge are unworthy of being received and credited.

As the nature of the process of *reasoning* has not yet come under our review, it may not at first appear to you, how essential the truths of intuition are to those very truths which are usually opposed to them. But that they are thus essential, a very little attention will be sufficient to show you.

All belief, it is evident, must be either *direct* or *indirect.* It is *direct,* when a proposition, without regard to any former proposition expressed or understood, is admitted as soon as it is expressed in words, or as soon as it rises silently in the mind. Such are all the order of truths, which have been denominated, on this account, *first truths.* The belief is *indirect,* when the force of the proposition, to which assent is given, is admitted only in consequence of the previous admission of some former proposition, with which it is felt to be intimately connected; and the statement in words, or the internal developement of these relative propositions, in the order in which their relation to the primary proposition is felt, is all that constitutes *reasoning.* The *indirect belief*

which attends the result of reasoning, even in the proudest demonstration, is thus only another form of some first truth, which was believed directly and independently of reasoning; and, without this primary intuitive assent, the demonstration itself, in all its beautiful precision and regularity, would be as powerless and futile as the most incoherent verbal wrangling.

Without *some* principles of immediate belief, then, it is manifest, that we could have no belief whatever; for we believe *one* proposition, because we discover its relation to *some other proposition*, which is itself, perhaps, related, in like manner, to *some other proposition formerly admitted*, but which, carried back as far as it may, through the longest series of ratiocination, *must* ultimately come to some *primary* proposition, which we admit *from the evidence contained in itself*, or, to speak more accurately, *which we believe from the mere impossibility of disbelieving it*. All reasoning, then, the most *sceptical*, be it remarked, as well as the most *dogmatical*, *must* proceed on some principles, which are *taken for granted*, not because we infer them by logical *deduction*, for this very inference must then itself be founded on some other principle assumed without proof; but because the admission of these first principles is a necessary part of our intellectual constitution. The ridicule, therefore, with which Dr Priestly and some other English metaphysicians, were disposed to regard the decision of philosophical questions, on certain ultimate principles of common sense, was surely, at least in its wide degree of extension,

misplaced; though the phrase *common sense*, it will be admitted, was not the happiest that could have been chosen. The controversy, indeed, was truly a verbal and insignificant one, *unless* as far as it had reference to the *unnecessary multiplication* of these principles, by the philosophers of this part of the island whom Dr Priestly opposed; since, if traced to their ultimate evidence, it could have been only from some one or more of *the principles of common sense*, at least from those *primary universal intuitions of direct belief*, which were all that Dr Reid and his friends meant to denote by the term, that the very reasonings employed *against* them derived even the slightest semblance of force. An argument that rejects not the phrase *common sense* only, which is of little consequence, but also what the phrase was intended, by its authors, to imply, is an argument confessedly *founded* upon *nothing*; which, therefore, as wholly unfounded, requires no answer, and which, at any rate, it would be vain to attempt to answer, because the answer, if it proceed on any ground whatever, must begin with *assuming* what the argument rejects, as *inadmissible*.

All reasoning, then, I repeat, whether sceptical or dogmatical, *must* take for granted, as its primary evidence, the truth of certain propositions, admitted *intuitively*, and independently of the reasoning, which *follows*, but cannot *precede*, the perception of their truth; and hence, as we cannot suppose that the subsequent ratiocination, though it may afford room for errors in the process, can at all add evidence to these primary truths; which, as directly believed,

are themselves the ultimate evidence of each successive proposition, down to the last result of the longest argument; we must admit that our identity, if it be felt by us intuitively, and felt *universally, immediately, irresistibly,* is founded on the very same authority as the most exact logical demonstration, with this additional advantage, that it is not subject to those possibilities of error in the steps of the demonstration, from which no long series of reasoning can be exempt.

So little accustomed are we, however, to think of this *primary fundamental* evidence of every reasoning, while we give our whole attention to the *consecutive propositions* which derive from it their force, that we learn, in this manner, to consider *truth* and *reasoning* as necessarily connected, and to regard the assertion of truths that do not flow from reasoning, as the assertion of something which it would be equally unworthy of philosophy to assert or to admit; though *every* assertion and *every* admission, which the profoundest reasoner can make, must, as we have seen, involve the direct or indirect statement of some truth of this kind. Nor is it wonderful that we should thus think more of the reasoning itself, than of the foundation of the reasoning; since the *first truths,* which give force to reasoning but require no reasoning to establish them, must necessarily be of a kind which all admit, and which, therefore, as always believed by *us,* and undisputed by *others,* have excited no interest in discussion, and have never seemed to *add* to our stock of *knowledge,* like the results of reasoning, which have added to it

truth after truth. Yet that they *are* thus uninteresting to us, is the effect only of their primary, and universal, and permanent force. They are the only truths, in short, which every one admits; and they seem to us unworthy of being maintained as *truths*, merely because they are the *only* truths which are so irresistible in evidence, as to preclude the possibility of a denial.

It is not as the primary evidence of all our processes of reasoning, however, that they are *chiefly* valuable. Every action of our lives is an exemplification of some one or other of these truths, as practically felt by us. Why do we believe, that what we *remember* truly took place, and that the course of nature will be in future such as we have already observed it? Without the belief of these physical truths, we could not exist a day, and yet there is no *reasoning* from which they can be inferred.

These principles of intuitive belief, *so necessary for our very existence*, and too important, therefore, to be left to the casual discovery of reason, are, as it were, an internal never-ceasing voice from the Creator and Preserver of our being. The reasonings of men, admitted by some, and denied by others, have over us but a *feeble power*, which resembles the general frailty of man himself. These *internal revelations from on high*, however, are omnipotent like their Author. It is *impossible* for us to doubt them, because to *disbelieve* them would be to deny what our very constitution was formed to admit. Even the Atheist himself, therefore, if, indeed, there be one who truly rejects a Creator and Ruler

of the universe, is thus every moment in which he adapts his conduct implicitly, and without reasoning, to these directions of the Wisdom that formed him, *obeying*, with most exact *subserviency*, that very *Voice* which he is professing to question or to deride.

That the assertion of principles of intuitive belief, independent of reasoning, may be carried to an extravagant and ridiculous length,—as, indeed, seems to me to have been the case in the works of Dr Reid, and some other Scotch philosophers, his contemporaries and friends,—no one can deny; nor that the unnecessary multiplication of these would be in the highest degree injurious to sound philosophy,—both as leading us to form false views of the nature of the mind, in ascribing to it principles which are no part of its constitution, and, still more, as checking the general vigour of our philosophic inquiry, by seducing us into the habit of acquiescing too soon, in the easy and indolent faith, that it is unnecessary for us to proceed farther, as if we had already advanced as far as our faculties permit. It is the *more* unfortunate, because our very avidity for knowledge, which is only another name for that philosophic curiosity in which inquiry originates, is itself favourable to this too easy acquiescence; tending, consequently, by a sort of double influence, to *repress* the very speculation to which it gave rise. This it does, by rendering the suspense of ungratified curiosity so *painful* to us, as to resemble, in a very great degree, the uneasiness which we feel from the ungratified cravings of bodily appetite. We more readily, there-

fore, yield to the illusion which seems to remove this suspense; and are happy to think, however falsely, that we have now completed our inquiry, and that, without attempting any more elementary analysis, we may content ourselves with simply classing the results which we have already obtained. Though there is no human being who must not have felt doubts on some point or other, it is not every one who knows how to doubt. To the perfection of a doubt, indeed, it is essential,—if I may apply to it what rhetoricians say of an epic or dramatic narrative,—that it should have a beginning, a middle, and in many cases, too, though not in all, an end. The middle is a very easy matter; the great difficulty relates to the beginning and the end, and to the end not less than the beginning. We err equally, when the doubt ceases too soon, and when it does not cease where it ought to cease. There is a scepticism as different from the true spirit of philosophy, as the most contented ignorance, that has never questioned a single prejudice; a scepticism, which, instead of seeking to distinguish truth from falsehood, *professes* to deny altogether the competency of our faculties as to making such a distinction in any case, and to which any proposition, therefore, is as likely as its opposite. With this wild half reasoning extravagance, which is ignorant whether it affirms or denies, and which does not even know certainly that it has any uncertainty at all, it would be manifestly absurd to reason; and we may even truly say of it, notwithstanding the high character of perfect doubting which it affects, that *it does not*

know how to doubt, more than the all-credulous imbecillity which it despises and derides; because it does not know in what circumstances doubt is legitimate, and in what circumstances it should cease. But, at the same time, *he* also, it may be said, *does not know how to doubt,* who is completely satisfied with the result of an inquiry *which he is capable of prosecuting still further,*—even though it were only by the addition of *a single step* to the thousand which he may already have made. Truth is the last link of many long chains; the first links of all of which, Nature has placed in our hands. When we have fairly arrived at the last, and feel completely that there is no link beyond, it would be manifestly absurd to suppose, that we can still proceed further;—but if we stop before we have arrived at the last, maintaining, without stretching out our hand to make the experiment, that there *cannot* be yet another link after that which we have reached, it matters not *how far* we may have advanced. Truth is still *beyond* us—to be grasped only by an arm more vigorous and persevering.

If, instead of maintaining boldly, that we have reached the last link of the chain, we content ourselves with affirming, that we have reached the last which human effort can reach, we must beware that we do not measure the incapacity of the whole race of mankind by our own individual inability, or, which is far from improbable, that we do not mistake for inability, even in ourselves, what is only the irksomeness of long continued exertion. Our power

is often much greater than we are willing to believe; and in many cases, as La Rochefoucault very justly says, it is only to excuse to ourselves our own indolence that we talk of things as impossible. "Non putant fieri," says Seneca, speaking of persons of this character, "quicquid facere non possunt. Ex infirmitate sua ferunt sententiam."—"Scis quare non possumus ista? Quia nos posse non credimus."—"Magno animo de rebus magnis judicandum est; alioqui videbitur illarum vitium esse quod nostrum est."

Much evil, then, it must be admitted, would arise in the Philosophy of Mind from a disposition to acquiesce too soon in instinctive principles of belief. But though these may be, and have been, multiplied unnecessarily, and beyond the truth of nature, it is not less certain, that of our mental nature such principles are truly a part. We should, indeed, draw *monsters*, not *men*, if we were to represent the human head and trunk with a double proportion of arms and legs; but we should also give an unfaithful portraiture of the human figure, and should draw monsters, not men, if we were to represent them with but one arm and leg, or with no arm or leg at all. In like manner, to suppose the mind endowed with more principles of intuition than belong to it, would be to imagine a species of *mental monster*. But it would not less be a *mental monster*, if we were to attempt to strip it of the principles which it truly possesses.

In contending, then, for the authority of certain *first principles of belief*, such as that on which I conceive the conviction of our identity to be found-

ed, I am sufficiently aware, in how many instances, reference to these has been rashly made by philosophers; when a deeper and more minute analysis would have shewn, that the supposed first principles were not elementary laws of thought, but were resolvable into others more simple. It is not to be inferred, however, from the rash attempts to establish principles of intuitive belief which do not exist, that there are no such principles in our mental constitution, any more than it is to be inferred, from the general prevalence of bad reasoning, that it is impossible for a human being to reason accurately. I trust, at any rate, that I have already sufficiently warned you, against the danger of acquiescing too soon in any proposition, as a law *of thought*, precluding all further inquiry, from its own primary and independent evidence; and that I have impressed you, not merely with the necessity of admitting *some* principles of this sort, as essential to *every* reasoning, but with the necessity also, of admitting them, only after the most cautious examination.

The difficulty of ascertaining precisely, whether it be truth which we have attained, is, in many cases, much greater, than the difficulty of the actual attainment. Philosophy has in this respect been compared, by a very happy illustration,—which, therefore, homely and familiar as it is, I make no scruple to quote,—to "a game at which children play, in which one of them, with his eyes bandaged, runs after the others. If he catch any one, he is obliged to tell his name; and if he fail to name him, he is obliged to let him go, and to begin his running once

more. It is the same," says Fontenelle, the author from whom I borrow this image, "in our seeking after truth. Though we have our eyes bandaged, we do sometimes catch it.—But then we cannot maintain with certainty that it *is* truth which we have caught;—and in that moment it escapes from us."

If there be, as it has been already shewn that there must be, intuitive truths; and, if we are not to *reject*, but only to *weigh cautiously*, the belief which seems to us intuitive, it will be difficult to find any, which has a better claim to this distinction, than the faith which we have, in our identity, as *one continued sentient and thinking being*, or rather, to speak more accurately, as *one permanent being capable of many varieties of sensation and thought*.

There is to be found in it, every circumstance which can be required to substantiate it *as a law of intuitive belief*. It is *universal, irresistible, immediate*. Indeed, so truly prior and paramount is it to mere reasoning, that the very notion of reasoning necessarily involves the belief of our identity as admitted. To *reason*, is to draw a conclusion from some former proposition;—and how can *one truth* be inferred from *another truth*, unless the mind, which admits the one, be the mind which admitted the other? In its order, as much as in its importance, it may be truly considered as the *first* of those truths which do not depend on reasoning, and as itself necessarily implied, perhaps in *all*, certainly in the *greater number*, of our other intuitions. I believe, for example, without being able to infer it, or even

to discover the greater probability of it, by any process of reasoning, that the course of nature in future will resemble the past; and, since all mankind have the same irresistible tendency, I have no scruple in referring it to *an original principle of our nature.* In taking for granted this similarity, however, in the order of succession of two distinct sets of phenomena, I must previously have believed, that *I*, the *same sentient being*, who expect a certain order in the future phenomena of nature, *have already* observed a certain order in the past.

Since, then, the belief of our identity is intuitive and irresistible, the only inquiry which remains is as to the circumstances in which the belief arises. Identity is a *relative* term. It implies of course, in every instance, a double observation of some sort. The identity of our mind is its continuance, as the subject of various feelings, or at least as that which is susceptible of various feelings. The belief of it, therefore, can arise only on the consideration of its *successive* phenomena; and is indeed involved in the mere consideration of these as successive.

The knowledge of our *mind* as a *substance*, and the belief of our *identity* during successive feelings, may be considered as *the same notion*, expressed in different words. Our *identity* is the unity and sameness of *that which thinks and feels*,—itself substantially unchanged amid the endless variety of its thoughts and feelings,—capable of existing separately in all these different states; not ceasing therefore when *they* cease, but independent of their transient changes. The knowledge of *mind, then, as a*

substance, implying the belief of identity *during changes of state*, cannot be involved *in any one* of these *separate states*; and, if our feelings merely succeeded each other, in the same manner as the moving bodies of a long procession are reflected from a mirror, without any vestige of them *as past*, or, consequently, any *remembrance* of their successions, we should be as incapable of forming a notion of the sentient substance *mind*, abstracted from the momentary sensation, as the mirror itself; though we should indeed differ from the mirror, in having what mind only can have, the sensations themselves, thus rapidly existing and perishing.

But, if it be only on the consideration of some *past* feeling, that the belief of the permanent substance mind can arise, it is to the principle which recals to us past feelings, that the belief is ultimately to be traced. We *remember*;—and in that remembrance is involved the belief, the source of which we seek. It is not merely a past feeling that arises to us, in what is commonly termed memory, but a feeling that is recognized by us as *ours*, in that past time of which we think,—a feeling, therefore, of that mind which *now remembers* what it before saw, perhaps, or heard, or enjoyed, or suffered. We are told by writers on this subject, that it is from a *comparison* of our present with our past consciousness, that the belief of our identity in these states arises; and this use of the term comparison, which is commonly applied to a process of a different kind, may perhaps mislead you as to this simpler process. It is true, indeed, that the belief arises from a feel-

ing of the past, that is remembered, together with the consciousness of our remembrance as a present feeling,—a contemplation, as it were, of two successive states of the mind. But the comparison is nothing more than this.—It is not to be supposed that we discover in the two feelings some common quality or proportion, as when, in arithmetic or geometry, we compare two numbers, or two regular figures; for the two feelings may have nothing common, except that very belief of identity which is involved in the remembrance itself. We remember the past, —we feel the present,—we believe, and cannot but believe, that the rememberer of the past existed in that past which he remembers. The *process* itself is sufficiently simple, however truly wonderful one of the feelings may be which forms the most important part of the process;—for we are not to forget, that the remembrance itself, the *revealer* of the *past*, is not a past, but a *present* feeling. It is the mind *existing* for the present moment in a particular state, as much as any primary and immediate *sensation* is the mind existing in a particular state. That this state of remembrance, itself a present feeling, should be representative to us of some former feeling, so as to impress us irresistibly with the belief of that former state of the mind, is indeed most wonderful; but that it does impress us with this belief, is as undeniable as the belief itself is irresistible.

Our faith in our identity, then, as being only another form of the faith which we put in memory, can be questioned only by those who deny all memory, and with memory all reasoning of every kind,

—who believe only the existence of the present moment, and who, with respect to everything else, are as incapable of opposing or questioning as they are of believing. If our memory be unworthy of the faith which we *intuitively* give to it, all that is founded on memory, and therefore demonstration itself, must equally deceive us. We cannot admit the most rigid demonstration, or expect it to be admitted, without having already admitted, intuitively, that identity, which in words only we profess to question, and to question which, even in words, is to assert the reality of that which we deny.

The belief of the identity of self, then, as the one permanent subject of the transient feelings remembered by us, arises from *a law of thought*, which is essential to the very constitution of the mind. It has accordingly all the qualities, which I can imagine to be required by the most rigid scrutinizer of our principles of intuitive assent. It is *universal*, and *immediate*, and *irresistible*. I do not believe, with more confidence, that the half of thirty-two is equal to the square of four, than I believe, that *I*, who computed the square of four, am the same with that mind, which computes the half of thirty-two, and asserts the equality of the two numbers.

This consideration is of itself decisive of the question of *identity;* since, if it be manifest, that there is an *universal*, *immediate*, and *irresistible* impression of our identity,—an impression, which cannot be traced to any law of thought more simple,—its truth is established by a species of evidence, which must be allowed to be valid, before the very objec-

tions can be put, in which it is professedly denied;—every objection, *however sceptical,* involving, as we have seen, and necessarily involving, the assertion of some such intuitive proposition, from which alone its authority, if it have any authority, is derived. In endeavouring to move the whole world of truth with his lever, there must still be some little spot at least, on which the sceptic must be content to rest his foot as firmly as others. Δὸς πῦ στῶ, he must still be condemned to say with Archimedes; and if we allow no resting-place to his foot,—or, even allowing him this, if we allow no fulcrum for the instrument which he uses, he may contract or lengthen his lever at pleasure; but all the efforts, which, in such circumstances, he can make, will exhibit nothing so striking to those by whom the efforts are witnessed, as the *laborious impotence of him who employs them.* To deny any first principles of intuitive belief, that are not themselves to stand in need of a demonstration,—which, as a demonstration, or series of consecutive propositions, can be founded, in its primary evidence, only on some principle of the same kind,—is, indeed, for such a sceptical mechanic, to set his foot upon air, rather than on the ground, on which all around him are standing, and to throw away the single fulcrum on which his lever rests, and from which alone all its power is derived.

The belief of our mental identity, then, we may safely conclude, is founded on an essential principle of our constitution,—in consequence of which, it is *impossible* for us to consider our *successive* feelings,

without regarding them as truly *our* successive feelings,—states, or affections of one thinking substance. But though the belief of the identity of the substance which thinks, is thus established on the firmest of all grounds, the very ground, as we have seen, on which demonstration itself is founded,—even though no particular fallacy could be traced in the objections brought against it, which I detailed in my last Lecture,—it is still an interesting inquiry, *in what the fallacy of the objections consists;* and the inquiry is the more interesting, as it will lead us to some remarks and distinctions, which, I flatter myself, will throw some light on the philosophy of all the changes, material as well as mental, that are every moment taking place in the universe.

The objections brought against the identity of the mind, from a supposed incompatibility of its *diversities* of *state* with *sameness* of *substance*, appear to me to depend on the assumption of a test of identity, transferred, without sufficient reason, from the obvious appearances of matter to mind, and which, if *matter* be accurately considered, is equally false, too, as applied to *it*. The cause of the transference, however, from the obvious material appearances, is a very natural one,—the same, which has included so many analogies, from external things, in the language, which we employ to express the intellectual functions. It is with the changes of the material substances around us, that all our operations, *which leave any fixed and permanent marks of our agency*, are immediately concerned. It is indeed only through

them, that our communication with other minds can be at all carried on; and it is not wonderful, therefore, that, in considering the nature of *change*, of every kind, our philosophy should be strongly tainted with prejudices, derived from the material world, *the scene of all the immediate and lasting changes, which it is in our power to produce.* How much the mere materialism of our language has itself operated, in darkening our conceptions of the nature of the *mind*, and of its various phenomena, is a question, which is obviously beyond our power to solve; since the solution of it would imply, that the mind of the solver was itself free from the *influence* which he traced and described. But of this, at least, we may be sure, that it is almost impossible for us to estimate the influence *too* highly; for we must not think, that its effect has been confined to the works of philosophers. It has acted, much more powerfully, in the familiar discourse, and silent reflections of multitudes, that have never had the vanity to rank themselves as philosophers,—*thus incorporating itself, as it were, with the very essence of human thought.* In that rude state of social life, in which languages had their origin, the inventor of a word probably thought of little more, than the temporary facility, which it might give to himself and his companions, in communicating their mutual wants, and concerting their mutual schemes of co-operation. He was not aware, that, with this faint and perishing sound, which a slight difference of breathing produced, he was creating that, which was afterwards to constitute *one of the most imperishable of things*, and to form, in the

minds of millions, during every future age, a part of *the complex lesson of their intellectual existence*,—giving rise to lasting systems of opinions, which, perhaps, *but* for the invention of this single word, never could have prevailed for a moment, and modifying sciences, *the very elements of which had not then begun to exist.* The inventor of the most barbarous term may thus have had an influence on mankind, more important, than all which the most illustrious conqueror could effect, by a long life of *fatigue*, and *anxiety*, and *peril*, and *guilt.* Of the generalship of Alexander, and the valour of his armies,—of all which he suffered, and planned, and executed, what permanent vestiges remain, but in the writings of historians! In a very few years, after the termination of his dazzling career, *every thing on the earth was almost as if he had never been.* A few phrases of Aristotle atchieved a much more extensive and lasting conquest, and are, perhaps, even at this moment, exercising no small sway on the very minds which smile at them with scorn, and which, in tracing the extent of their melancholy influence on the progress of science, *in centuries that are past*, are unconscious that they are describing and lamenting prejudices, of which they are themselves still, in a great measure, the slaves. How many truths are there, of which we are ignorant, *merely because one man lived!*

To return, however, to the objections, which we are to consider. Diversity of any kind, it is said, is inconsistent with absolute identity, in any case, and in the *mind*, which is by supposition *indivisible*, no-

thing can be added to it or taken away, and no internal change can take place, in the relative positions and affinities of *parts which it has not.* Joy and sorrow are *different* in themselves; that which is joyful, therefore, and that which is sorrowful, cannot be *precisely* the same, or *diversity of any kind* might be *consistent* with *absolute identity.* That the joyful and sorrowful mind are precisely the same, is not asserted, if the sameness be meant to imply sameness of state; for it is admitted, that the *state* of the mind is different in joy and sorrow; and the only question is, *whether* this difference, to which we give the name of *difference of state,* be incompatible with complete and absolute *sameness of substance.*

The true key to the sophistry is, as I have already said, that it assumes a false test of identity, borrowed, indeed, from the *obvious* appearances of the material world, but from these *obvious* appearances only. Because diversity of any kind *seems,* in these familiar cases, to be inconsistent with absolute identity, we draw hastily the *universal* conclusion, that it is inconsistent with absolute identity in any case. Paradoxical as the assertion may appear, however, we may yet safely assert, that, not in mind only, but, as we shall find, in *matter* also; some sort of diversity is so far from being inconsistent with absolute *identity,* that there is scarcely a single moment, if, indeed, there be a single moment, in which *every atom in the universe* is not constantly changing the tendencies that form its physical character, without the slightest alteration

of its own absolute identity; so that the variety of states or tendencies of the same identical mind, in joy and sorrow, ignorance and knowledge, instead of being opposed, as you might think, by the *general analogy of nature*, is in exact harmony with that general analogy. It is from our view of *matter*, unquestionably, as implying, in all its visible *changes of state*, some *loss of identity*, some addition or subtraction of particles, or change of their form of combination, that the objection, with respect to the identity of the *mind*, during its momentary or lasting changes of state, is derived; and yet we shall find, that it is only when we consider even matter itself superficially and slightly, that we ascribe the changes which take place in it, to circumstances that affect its identity. To view it more profoundly and accurately, is to observe, *even in matter*, constant *changes of state*, where the identity has continued *entire*, and changes as *opposite* as those of the *mind* itself, when, at different periods, it presents itself in different aspects, as *sad* and *cheerful*, *ignorant* and *wise*, *cruel* and *benevolent*.

The apparent mystery of the *continued identity* of one *simple* and *indivisible mind*, in all the variety of states, of which it is susceptible, is thus, in a great measure, solved, when we find this union of *variety* and *sameness* to be the result of a law that is not limited to our spiritual being, but extends to the whole universe, or at least to every thing which we know in the universe. It can no longer appear to us *peculiarly wonderful*, that *the mind* should exist at

different moments in opposite states, and yet be the same in its own absolute nature, when we shall find that this compatibility is true of *every atom around us*, as much as of *the mind itself*.

LECTURE XIV.

CONTINUATION OF THE ANSWER TO OBJECTIONS AGAINST THE DOCTRINE OF MENTAL IDENTITY.

My Lecture yesterday was, in a great measure, employed in illustrating the primary evidence of those principles of *intuitive assent*, to which we traced our belief of the *identity of the mind* as *one* and *permanent*, in all the variety of its ever-changing affections. I explained to you, particularly with a view to that vague and not very luminous controversy, in which Dr Priestly was engaged with some philosophers of this part of the island, in what manner the truth of these intuitive propositions *must* be *assumed* or *admitted* by all who reason, even by the wildest sceptic who professes to question them; pointing out to you, at the same time, the danger to which two of the strongest principles of our constitution, our *indolence* and our *love of knowledge*, alike expose us —the danger of believing *too soon* that we have *arrived* at truths which are susceptible of any minuter analysis. In conformity, therefore, with the caution which this danger renders necessary, we examined the belief of *our continued identity*; and we found

it to possess the distinguishing marks, which I ventured to lay down as the *three* great characters of *intuition*, that it is *universal*, *immediate*, and *irresistible*;—*so universal*, that even the very maniac, who conceives that he was *yesterday* emperor of the Moon, believes that he is *to-day* the very person who had yesterday that empire—so *immediate*, that we cannot consider any two feelings of our mind *as successive*, without instantly considering them as feelings of *our* mind, that is to say, as states of *one permanent* substance, and *so irresistible*, that even to doubt of our identity, if it were possible for us truly to doubt of it, would be to believe, that our mind, which doubts, is *that very mind* which has reflected and reasoned on the subject.

Having thus stated the *positive* ground of belief, in our spiritual identity, I proceeded to consider the *negative evidence* which might arise from the confutation of the objections urged against it,—objections drawn from the supposed incompatibility of the *changes* of our mental affections, with that *strict absolute* identity of substance, *to which nothing can have been added*, and *from which nothing can have been taken away*. The test of identity, which this supposed incompatibility implies, I stated to be a very false one, transferred from *matter* to *mind*, and borrowed, not from a *philosophical*, but from a very *superficial* view *even of matter itself*. *If* it appear, on a closer inquiry, that *matter itself, without the slightest loss of identity*, exists at different moments, in states which are not merely *different* but *opposite*, and exists in almost infinite variety of

such states, it cannot surely seem wonderful, that the *mind* also should, without the slightest loss of *its* identity, exist, at different moments, in states that are *different* and *opposite*.

That a superficial view of matter, as it presents itself to our mere organs of sense, should lead us to form a different opinion, is, however, what might readily be supposed, because the analogies which that superficial view presents, are of a kind that seem to mark a loss of identity whenever the state itself is altered.

In *experimental philosophy*, and in the obvious *natural phenomena* of *the material world*, whenever a body changes its state, some *addition* or *separation* has *previously* taken place. Thus, *water* becomes *steam* by the *addition*, and it becomes *ice* by the *loss*, of a portion of that matter of heat which is termed by chemists *caloric*; which *loss* and *addition* are, of course, inconsistent with the notion of *absolute numerical* identity of the corpuscles, in the three states of water as a solid, a liquid, and a gaseous vapour. *Perception*, by which the mind is metaphorically said to *acquire* knowledge, and *forgetfulness*, by which it is metaphorically said to *lose* knowledge, have, it must be confessed, a very striking analogy to these processes of corpuscular loss and gain; and, since *absolute identity* SEEMS to be inconsistent with a *change of state* in the *one* set of phenomena, with which we are constantly familiar, we find difficulty in persuading ourselves, that it is not inconsistent with a change of state in the other set also. It is a difficulty of the same kind as that which every one

must have felt, when he learned, for the first time, the *simple physical law*, that matter is *indifferent* as to the states of *motion* and *rest*, and that it requires, therefore, *as much* force to *destroy* completely the motion of a body, as to give it that motion when at rest. We have not been accustomed to take into account the effects of *friction*, and of atmospherical resistance, in gradually destroying, without the interference of any visible force, the motion of a ball, which we are conscious of *effort* in rolling from our hand; and we think, therefore, that *rest* is the *natural state* of a body, and that it is the very nature of *motion* to *cease spontaneously*. "Dediscet animus sero, quod dedicit diu." It is a very just saying of a French writer, that "it is not easy to persuade men to put their *reason* in the place of their *eyes*; and that when, for example, after a thousand proofs, they are reasonable enough to do their best to believe, that the planets are so many opaque, solid, habitable orbs, like our earth, they do not believe it *in the same manner* as they would have done *if they* had *never* looked upon them in another light. There still *comes back upon their belief* something of the first notion which they had, that clings to them with an obstinacy, which it requires a continual effort to shake off." *

It is, then, because some *substantial loss* or *gain* does truly take place in the changing phenomena of the bodies *immediately around us*, to which we are accustomed to pay our principal attention, that we

* Fontenelle, Pluralité des Mondes, Conversat. 6me.

learn to regard a *change of state* in *matter* as significant of *loss of identity*, and to feel, therefore, some hesitation in admitting the mental *changes of state* to be consistent with *absolute sameness of substance*. Had our observation of the *material* phenomena been different, there would have been a corresponding difference in our view of the changes of the phenomena of the mind.

If, for example, instead of previously gaining or losing caloric,—as in the constitution of things of which we have our present experience,—the particles of the water had suddenly assumed the state of *vapour* on the *sounding of a trumpet at a distance*, and the state of *ice* immediately on *the rising of the sun*,—in short, if the different changes of state in bodies, by which their physical character for the time seems, in many cases, to be wholly altered, had occurred *without any apparent loss or gain of substance*, we should then no longer have found the same difficulty in admitting the *changes* of *state* in *mind* as consistent with its *identity;* and the *sentient substance*, which previously existed in a different state, might then, on the sounding of a trumpet, have been conceived by us to begin to exist, *in the state which constitutes that particular sensation of hearing*, or, on the rising of the sun, to exist in that different state which constitutes the sun's change of colour, as readily as the *material substance*, previously existing in the form of water, to begin at the same moment, without any essential or numerical change, and consequently with perfect identity, to exist in the *new* state of *steam*, or in the state of a chrystal-

line mass, as solid as the rock from which it hangs as an icicle, or that glitters with its gemmy covering.

But it may be said, that the very supposition which we now make is an absurd one; that the mere presence of the sun in the firmament, *at a distance from the water*, cannot be supposed to convert it into ice, unless the water *gain* or *lose* something, and consequently cease to have absolute identity; and that the case, therefore, is of no value, as illustrating the compatibility of change of state in our various *sensations*, with unaltered identity of the *sentient mind*. To this I *might* answer, that although the presence of the sun certainly does not operate in the manner supposed,—*as* the sequences of events are now arranged in the great system of nature,—it is *only by experience*, and not by *intuition* or *reasoning*, we know, that the presence of the sun has *not* the very effect which the separation of caloric now produces, and that there is nothing *absolutely* more wonderful in the one case than in the other. If our experience had been the reverse of this,—if the change of place of a few particles of caloric had not, as now, converted the liquid water into that solid congeries of crystals which we call *ice*,—we should then have found as little difficulty in conceiving that it should *not* have this effect, as we now find in adapting our belief to the particular series of events which constitute our present experience.

It is not necessary, however, to have recourse to *suppositions of this kind;* since the system of nature,

even according to our present experience of it, furnishes sufficient proof of *changes* as wonderful in the *state* of bodies produced obviously at a distance, and, therefore, without any *loss* or *addition* which can affect their identity. For sufficient evidence of this, I need appeal only to the agency of the celestial *gravitation;* that gigantic energy of nature which *fills* the universe, like the immediate presence of the Deity himself,—to which, in the immensity of its influence, the distances, not from planets to planets merely, but from suns to suns, are like those invisible spaces between the elements of the bodies around us, that seem *actual contact* to our eyes,—and in comparison with which, the powers, that play their feeble part in the physical changes on the surface of our earth, are as inconsiderable as the atoms, on which *they* exercise their little dominion, are to the massy orbs which *it* wields and directs at will,—

> "Those bright millions of the heavens,
> Of which the least full Godhead had proclaim'd,
> And thrown the gazer on his knee."—"Admire
> The tumult untumultuous! All on wing,
> In motion all; yet what profound repose!
> What fervid action, yet no noise!—as aw'd
> To silence by the presence of their Lord."

The action of these great planetary bodies on each other,—it surely cannot be denied,—leaves them *separate identities, precisely as before;* and it is a species of agency, so essential to the magnificent harmony of the system, that we cannot conceive it to have been interrupted, *for a single moment,* since the universe itself was formed. An action, there-

fore, has been constantly taking place *on all the bodies in the universe*,—and consequently a difference of some sort produced,—which *yet leaves their identities unaffected*. But, though the identity of the *substance* of the separate orbs is not affected by their mutual attractions, the *state*, or temporary physical character, of these orbs,—considered individually as one great whole,—*must* be affected,—or it would be absurd to speak of their mutual *agency* at all; for action implies the sequence of a change of some sort, and there can be no *action*, therefore, where the *substances* continue precisely the same, and their *state* also precisely the same, as before the action. Accordingly, we find, on our own globe, that great *changes of state*, such as form the most striking of its regular visible phenomena, *are* produced by this distant operation. The waters of our ocean, for example, rise and fall,—and, therefore, must have altered states, or physical tendencies, in consequence of which they rise and fall, as there is no corresponding addition or subtraction of matter,—at regular intervals,—which it is in our power to *predict* with infallible accuracy,—not because we can divine any loss of identity in the fluid mass,—any internal change in its elementary composition, or the nature and varieties of the winds, which are to sweep along its surface,—but because we know well, at what hours, and in what relative situation, a certain great body, at the distance of some hundreds of thousands of miles, is to be passing along the heavens.

If, then, the mere position of a distant heavenly

body can cause the particles of our ocean to arrange themselves in a different configuration,—from that in which they would otherwise have existed, and, therefore, must have produced in the particles that change of state, which forces them, as it were, into this altered form,—without *addition* to them of any thing, or *subtraction* of any thing,—in short, *leaving in them the same absolute numerical or corpuscular identity as before*,—there surely can be no greater difficulty, in supposing, as in the case before imagined, that a certain position of the sun might have immediately caused the particles of a distant liquid, to arrange themselves in *the particular configuration*, that constitutes the solid *ice*,—which, though perhaps a *more striking* change of state, would not have been more truly *a change of state*, than that, which it now unquestionably produces, in modifying the rise or fall of our tides. And, if a distant body can produce *in matter* a change of state, without affecting its identity, by any addition or subtraction, we may surely admit, that the presence of an external body, as in perception, may, *in mind also*, produce a change of state, without affecting *its* identity; unless, indeed, (which is not impossible, because nothing is impossible to human folly,) we should be inclined to *reverse* our prejudices, and maintain, that *matter* may be easily conceived to change the affinities or tendencies that form its physical character, in the particular circumstances observed, without any addition or subtraction of substance, but that some positive addition or subtraction of sub-

stance *is*, notwithstanding, essential to the simple changes or affections of the *mind*.

If the moon were suddenly annihilated, our earth would still be *the same identical planet*, without the *loss* or *gain* of a *single particle of substance*. But the state of this planet, as a whole, and of every atom of this planet, would be instantly altered, in many most important respects,—so completely *altered*, indeed, that not an atom of the mass would tend to the other atoms of the mass, in the same manner as before. In like manner, if the *light*,—which now, operating on one of my organs of sense, causes my mind to exist in the state that constitutes the sensation of a particular colour,—were suddenly to *vanish*, the *state of my mind* would be instantly changed, though my mind itself, considered as a substance, would still continue *unaltered*. In *both* cases,—the *spiritual*, and the *material*,—and in both cases alike, —*absolute identity*, in the strictest sense of the term, *is consistent* with innumerable *diversities*.

In the discussion of this supposed difficulty, I have chosen, for illustration, in the first place, to consider the *planetary attractions*, in preference to those which occur, in *the minuter changes*, that are simply terrestrial; because, in the case of *operations at a distance*, it is impossible for us, *not* to perceive, that, even in matter, a *change of state* is not inconsistent with *complete permanence of absolute corpuscular identity*; while, in the *compositions* or *decompositions*, that occur spontaneously, or by artificial experiment, in the physical changes on the sur-

face of our earth, the *additions* or *subtractions* of *matter, that appear to us to constitute these phenomena,* truly *destroy* the *corpuscular identity* of the substances, in which the change takes place; and the change of state is thus considered by us, as *implying* a *positive substantial* change. But, when we examine even these phenomena a little more deeply, we shall find, that, like the great operations of gravitation on the masses of the universe,—the change, in *these* also, is not a positive *change of substance,* but is simply *a change of state* in a congeries of independent substances, which we term *one* substance, merely because the spaces, that are really between them, are imperceptible to our very imperfect organs; the addition or subtraction of matter being not that which constitutes the new states or tendencies of the particles which continue present, but merely that which gives occasion to those changes of state or tendency;—as the positions of the heavenly bodies do not constitute the phenomena of our tides, but merely give occasion to that *difference* of state in the particles of the ocean, in consequence of which they assume of themselves a different configuration. Man is placed, as it has been truly said, on a point, between two infinities,—the infinitely *great,* and the infinitely *little.* It may be an extravagant speculation, to which I have before alluded,—but it is not *absolutely absurd,* to suppose, that, in the unbounded system of nature, there may be beings, to whose vision the whole planetary attendants of each separate sun, which to us appear to revolve at distances so immense, may yet seem but

one small cohesive mass,—in the same manner, as to those animalculæ, whose existence and successive generations had been altogether unknown to man, till the microscope *created* them, as it were, to his feeble sight,—and which, perhaps, are mighty *animals* compared with races of beings still more minute, that are constantly living in our very presence, and yet destined never to be known to us,—those bodies, which to us seem one small cohesive mass, may appear separated by distances, *relatively as great*, as to *us* are *those of the planets*. That light, *itself a body*, should pass freely through a mass of solid crystal, is regarded by us as a sort of physical wonder; and yet it is far from impossible, that, between the atoms which compose this apparently solid mass, whole nations of living beings may be dwelling, and exercising their mutual works of peace or hostility; while perhaps, if philosophy can be exercised, in brains of such infinitesimal dimensions, in the same manner as in our coarser organs, the nature of the atoms, or distant worlds around them, may be dividing with endless absurdities, the Ptolemies and Aristotles of the little republics. We have all so much of the nature of the inhabitants of Brobdignag, that a supposition of this kind,—which is perhaps truly in itself not a very probable one,—yet appears to us much *more* improbable, than it really is. We smile, as recognizing our own nature, when the sovereign of that country of giants is represented by the most unfortunate, or rather the most fortunate of all voyagers, as " turning to his first mi-

nister, who waited behind him with a white staff, near as tall as the mainmast of the Royal Sovereign, and observing how contemptible a thing was human grandeur, which could be mimicked by such diminutive insects. "And yet," said he, "I dare engage, those creatures have their titles and distinctions of honour; they contrive their nests and burrows, that they call houses and cities; they make a figure in dress and equipage; they love, they fight, they dispute, they cheat, they betray." And we fully enter into the difficulty which the *savans* of the country, who had all agreed that the new-discovered animal could not have been produced according to the regular laws of nature, must have found, in giving him a name. "One of them seemed to think that I might be an embryo, or abortive birth. But this opinion was rejected by the other two, who observed my limbs to be perfect and finished; and that I had lived several years, as it was manifest from my beard, the stumps whereof they plainly discovered through a magnifying-glass. They would not allow me to be a dwarf, because my littleness was beyond all degrees of comparison; for the queen's favourite dwarf, the smallest ever known in that kingdom, was near thirty feet high. After much debate, they concluded unanimously, that I was only *relplum scalcath*, which is interpreted literally *lusus naturæ;* a determination exactly agreeable to the modern philosophy of Europe, whose professors, disdaining the old evasion of occult causes, whereby the followers of Aristotle endeavoured in vain to disguise their igno-

rance, have invented this wonderful solution of all difficulties, to the unspeakable advancement of human knowledge." *

Whatever may be thought of speculations of this kind, however, with respect to the relative distance of the atoms of bodies, it is not the less certain, that these atoms are *separate* substances, *independent* of the other similar or different substances that *apparently* adhere to them in continuity,—that they are, in truth, the only material substances which really exist, since the bodies which we term masses are only those very *atoms* under *another name*,—that they remain, *and cannot but remain, identical*, amid all the changes of chemical composition or decomposition,—and that the *change* which *they* suffer, therefore, however strikingly their physical character may be altered for the time, is a change not of *substance*, but of *state* only. In the case of the formation of *ice*, for example, the *elementary atoms* themselves, which are all that truly exist in nature, *are* not, and *cannot* be, changed; but particles, which were formerly easily separable from adjacent particles, now *resist* this separation by a considerable force. There is a change in their *state*, therefore, since they now exist with a different degree of tendency toward each other,—a change, to which the separation of a quantity of caloric may, indeed, have *given occasion*, but which is to be *distinguished from* that momentary *separation itself*, since the *solidity*, which is only another name for the corpuscular resistance, *continues after the separation is complete*, and would

* Gulliver's Travels, part ii. chap. 3.

continue for ever, unless a change of temperature were again to restore that former state or tendency of the particles, in which they were easily separable. To him who has learned to consider bodies as, what they truly are, a multitude of separate and independent corpuscles, there is no change of identity, and cannot be any change of identity, in all the phenomena or changes of the universe. The atoms, which alone existed, continue as before; and all which constitutes the phenomenon, or varieties of successive phenomena, is a change of their *place* or *tendency*.

This *corpuscular* view of the material universe,—which, of course, admits an infinite variety of applications, corresponding with the infinite variety of its phenomena,—has many most striking analogies in that moral universe, with the phenomena of which we are chiefly concerned. Indeed, when we consider any of the *masses* before us, as deriving all its apparent magnitude from a number of *separate bodies*, of which it is composed,—any one of which, *individually*, would be too minute to be *distinguishable* by us,—it is scarcely *possible not* to think of the similarity which it presents to the multitudes of human beings that are, as it were, *massed* together in the great nations of the earth; and in which any single individual, if he could be supposed to have exercised his powers *separately*, would have been truly as insignificant as a single atom separated from the mass of which it is a part. What we call the *greatness* of a nation, is nothing more than the union of a number of little interests and little passions joined in one common object; to which insignificant elements,

so wonderful when combined, if we could distinctly reduce, by analysis, the most unrivalled power that has ever commanded the admiration and envy of the world, it would, at first view, run some little risk of appearing contemptible. The advantages of this social union of mankind, as *silently* felt at every moment, are unquestionably so infinite in comparison, as almost to sink into nothing the occasional evils to which the aggregation and massing of so many powers, when ill directed, may give rise,—though these terrific evils, when they occur, may dwell more *permanently* in the mind;—like the visitations of *storms* and *earthquakes*, which we remember for ever, while, with a sort of thankless forgetfulness, we scarcely think of the calm beauty and regularity which, season after season, passes over us. The rock which, descending from the top of a mountain, lays waste whatever it meets in its progress,—and to attempt to stop which, *while its short career lasts*, would be almost like instant annihilation,—derives this overwhelming force from an infinite number of independent corpuscles, any one of which, *if it had fallen singly*, would have been far less destructive than the flutter of an insect's wing; and that tyrannical power of a single man, before which, in unhappy ages of successful oppression, the earth has so often trembled,—as before some power of darkness, endowed with more than human sway,—has derived its irresistible might, not from powers included in itself,—which, in reference to the objects achieved by it, would have been feeble indeed,—but from the united powers of beings *still feebler*, who were trem-

bling while they executed commands to which *themselves alone* gave *omnipotence.*

To this corpuscular view, however, though it is unquestionably the *sort* of view to which, in our ultimate physical inquiries into the phenomena of matter, we *must* come, you may, perhaps, not be sufficiently accustomed, to enter fully into the reasoning on the subject. It will probably be *less* difficult for you, if we take rather, as an illustration, the simpler case of *impulse;* in which the bodies affecting each other are not, as in chemistry, indistinguishable corpuscles, but *masses,* clearly defined, and easily perceptible.

I need not, of course, repeat the arguments formerly stated, to prove that *attraction,* however *general* it may be as a law of matter at *all visible distances,* does not continue, but gives place to an *opposite tendency* at those smaller distances, which we are unable to perceive with our weak organs, and which we learn to estimate only by effects that are inconsistent with absolute contact;—for example, by the well-known fact of the *compressibility* of bodies, which could not take place if their particles were already in contact, and which, by the continually increasing resistance to the compressing force that would bring the corpuscles nearer, shews, that there is, at different degrees of nearness, a tendency continuing to operate which is the very *reverse* of attraction. There is, therefore, every reason to believe, —since repulsion, as the fact of forcible compression shews, takes place while the particles of bodies are still at a certain distance,—that the motion pro-

duced in one body by another, and ascribed to immediate *impulse*, is produced, *without actual contact*, by this mutual *repulsion*, as it is called, of the bodies when brought within a certain invisible degree of vicinity to each other; or, in other words,—for repulsion means nothing more mysterious than this simple fact,—the *tendency* which bodies, in certain relative positions of apparent but not actual contact, have *to fly off from each other with certain degrees of velocity*, as in certain other relative positions, of distinguishable distance, they have a tendency to approach each other. This repulsion, or tendency *from* each other at one point of nearness, is of itself as easy to be conceived, as that *attraction*, or tendency *toward* each other at other points of distance, to which we give the name of *gravitation*; and it is only from our greater familiarity with the *one*, as operating at distances which are *visible*, while the other,—except in a few cases, such as those of magnetism and electricity,—operates only at distances which are imperceptible to us, that we feel a little more difficulty in admitting the *repulsion* than the *attraction* of matter. There is then,—however *universal gravitation* may seem, when we think only of *perceptible* distances,—*a certain point of near approach*, before actual contact, at which *gravitation* ceases; and, beyond this point, the tendency of bodies *toward* each other is converted,—as the force necessary to compress them evidently shews,—into a tendency *from* each other; *both* tendencies, indeed, being *inexplicable*, but the one in no respect more so than the other.

For this apparent digression, on a point of general physics, I make no apology, as it is absolutely necessary for illustrating the particular case to which I am to proceed. The consideration of it requires, what the whole of this discussion, indeed, has already required from you, no small exercise of patient attention; but I trust that I sufficiently prepared you for this, in a former Lecture, when I stated the importance of such attention, not merely in relation to the subject considered at the time, but as a part of your mental discipline, and the advantage which might thus be derived to your *intellectual character*, from the very *difficulties* which the subject presents. It is in philosophy, as in many a fairy tale. The different obstacles which the hero encounters, are not progressively *greater* and *greater*; but his most difficult achievements are often *at the very commencement of his career*. He begins, perhaps, with attacking the castle of some enchanter, and has to force his way, *unassisted*, through the griffins and dragons that oppose his entrance. He *finishes* the adventure, with the death of the magician—and strips him of some ring, or other talisman, which renders his *subsequent* adventures comparatively easy and secure. I cannot venture to say, indeed, that a perfect acquaintance with the difficulties of the present question, and of some of the late questions which have engaged us, will be such a talisman to you, in your future career of intellectual science. But I may safely say, that *the habit of attentive thought*, which the consideration of subjects, so abstract, necessarily produces, in those who

are not too indolent to give attention to them, or too indifferent to feel interest in them, is *more truly valuable* than any *talisman*, of which accident or force might deprive you. The *magic* with which this endows you, is not attached to a *ring*, or a *gem*, or any thing *external;* it lives, and lives for ever, in the very essence of your minds.

When a billiard ball, on being struck, approaches another, which is at rest, it soon arrives at the point of seeming, but not actual contact, at which their mutual attraction ceases, and the force which it has acquired still carrying it on, it passes this *bounding* point, and arrives at a *point* at which *repulsion* has already begun. Accordingly the body, formerly at rest, *now* flies off, on a principle precisely similar, (though the mere *direction* be opposite) to that by which the same ball, if dropped from a hand that supported it, would, without the actual impulse of any body, have *quitted its state of rest*, as in the present case, and have *gravitated*, or, which is the same thing, have *moved of itself toward the earth.*

Before the first ball, which you will, perhaps, more easily remember by the name, A, arrived so very near to the second ball B, as to have come within the sphere of their mutual repulsion, *this second ball was at rest*, that is to say, it had *no tendency to move in any direction.* This state of rest, however, is only one of the many states, in which a body may exist; and if, which must surely be allowed, a body *having a tendency to continued motion*, be in a *different state*, from one which *has no such tendency*, this *change of state* implying, it

must be remarked, not *even the slightest loss of identity*, has been produced in the body B, *by the mere vicinity of the body* A. For the sake of illustration, let us now suppose this body A to be *hot* or *luminous*. It will still, as before, produce the new state of *tendency* to *motion*, in B, when it arrives within the limits of their sphere of repulsion. Is it *less* conceivable, then, that the mere *presence* of this hot or luminous body should produce the new *sensation* of *warmth*, or of *colour*, which are *different states* of the *sentient mind, without affecting in the slightest degree the identity of the mind itself*, than that it should produce, without any loss of absolute identity, in the body B, an immediate tendency, in that body, to move along with a certain velocity, a *state as different* from that *in which it remains at rest*, as the sensation of *warmth*, which is *one* state of the mind, is different from the sensation of *colour*, which is *another* state of the mind? Nor does the parallel end here; for, since a body at rest, *acquiring a tendency* to *begin* motion in one particular direction, as, for example, *to move north*, must be in a different state from that in which it would have been, if it had acquired an instant tendency to move *east*, or in any other direction; and, the direction once begun, being the same, since a body having a tendency to move with *one* velocity, must, at every moment of its progress, be in a *different state* from that in which it has a tendency to move with a different velocity, it is evident, that the mere presence of a body may produce, in a second body, according to the difference of their positions and relative mag-

nitudes, a *variety* of *states*, that, when all the varieties of direction, and all the varieties of velocity are estimated together, may be considered as *infinite*,—equal at least in number, to the different states of which the *mind* is susceptible, in its almost infinite variety of feelings; and *all this* without any essential change, that can affect the *identity* of the quiescent or moving body, or any essential change, that can affect the *identity* of the mind.

I am aware, that, when you consider, for the first time, this assertion of an infinite variety of *states*, corresponding with all the innumerable varieties of *direction* and *velocity*, in the tendencies of a *simple billiard-ball*, which, in the various circumstances supposed, *appears to us precisely the same, in all its sensible qualities*, you may be apt to conceive, that the assertion must be founded on a mistake, and, from the influence of former prejudice, may be inclined to think, that, when it exhibits a tendency to begin to move *east*, at one time, and, at another time, a beginning tendency to move *north*, this does not arise from any *difference of state* in itself, but from its being merely *carried along* by the first ball, which was itself previously moving in one or other of these particular lines of direction. When the elastic billiard-ball, however, bounds away from the ball which strikes it, this supposition is manifestly inapplicable;—and, in all cases, it is the influence only of former prejudice which can lead you to this opinion,—the influence of that prejudice, by which you may have been accustomed to consider *impulse*, not as inducing a tendency to motion at *some little distance*, but as in-

volving the necessity of actual contact. To destroy this prejudice, a very little reflection on the phenomena of *elastic bodies*, in their shocks and mutual retrocessions, is surely all that can be requisite; and if the *motion of* B, and *consequently its tendency to motion*, have begun, *without contact of* A, as it afterwards continues while A, the elastic body which struck it, is moving back in an opposite direction, it could not be *by mechanical trusion*, as *carried along* by A, which is still at some points of distance from it when its motion begins, and at still greater distance the longer the motion continues, that B has assumed any one of its variety of states,—that, for example, in which, in one case, it tends to move *east*, in another case to move *north*, in one case to move *rapidly*, in another *slowly*. To say that the body acquires this new tendency because it is impelled, is only to say that it is impelled because it is impelled. It is an equally idle use of language, to affirm, as if a word could *obviate* the difficulty instead of merely stating it,—that A, in communicating a different tendency to B, which was before at rest, does this by a *principle*, or *power* of repulsion; for this, as I have said, is merely to state in a single word, the regularity in certain circumstances of *the very fact asserted*. The different *tendencies of B*, and consequently the *different* states in which B exists,—are not the *less* different, in whatever manner the difference may have been produced, or by whatever word, or combination of words, the difference may be expressed. There is no magic, in the phrase, *principle of repulsion*, or *power* of repulsion, which

can render the *same*, states or tendencies that are in themselves opposite;—for, as far as we understand the phrase, it expresses *nothing more* than the invariableness of the *simple fact*, that, in certain circumstances of relative position, bodies have a tendency to *fly off from each other*, as in certain other circumstances of relative position, which constitute the phenomena of *gravitation*, they have a tendency to *approach*. Whateyer term we may employ to denote it, it is still a physical fact, that at a certain point of near and seemingly close approach of another mass, a body which was before in a state of rest, acquires immediately a tendency to fly off in *different directions*, and with different velocities at different times, and consequently, that, if the tendency to begin or to continue motion, in *one* direction, and with one velocity, be a *state* different from that which constitutes the tendency to begin or to continue motion in another direction, and with another velocity, the ball B, in these different circumstances, *however identical it may be in substance*, exists in two different states;—or all states, however different, may be said to be the same.

It may be admitted, then, that *the feeling of rapture* is a *state of mind*, completely different from that which constitutes the *feeling of agony*,—that the sensation of the fragrance of a rose, has no resemblance to our *conception of a sphere* or of an *equilateral triangle*,—and that, in general, all those thoughts and emotions, which,—more truly than the mere union of the immortal spirit within us with

the body which it animates,—may be said to constitute *life*,

> "Love, Hope, and Joy, fair Pleasure's smiling train,—
> Hate, Fear, and Grief, the family of Pain;"

these, as they prevail, in different hours, render the same individual mind more unlike to itself, if its *states* or tendencies alone, and not its *substantial identity* be considered, than the minds perhaps of any two human beings, at the same moment. But still, as we have seen, *even from the analogy of the material world*,—which was supposed to furnish a powerful objection, it is no argument against the absolute identity of the mind, that it exists *in different states*, however opposite, any more, than it is an argument against the absolute identity of a body, that it, *at one moment*, has a tendency to *one* particular motion,—at *another moment* a tendency to a *different motion*,—and at *another moment*, *no tendency whatever to motion of any kind*; since, in all these cases, *as much as in the varying affections of the mind*, there is a *change of state*, with *absolute identity of substance*.

LECTURE XV.

CONSIDERATION OF THE OBJECTIONS AGAINST MENTAL IDENTITY, CONTINUED; OPINION OF MR LOCKE RESPECTING IDENTITY; SOURCE OF HIS PARADOX ON THIS SUBJECT; AND REFLECTIONS SUGGESTED BY IT.

My last Lecture, Gentlemen, was employed in considering the general objection to the Identity of the Mind, drawn from the *contrasts of its momentary feelings*,—an objection founded on the supposed incompatibility of *diversity* of any kind, with strict and absolute *identity*. After the very full examination which *it* received, it is unnecessary to dwell at any length on the *other* objection, drawn from *changes of general character*, in the same individual, *at different periods of life*, or in *different circumstances of fortune*; since precisely the same arguments, from the general analogy of nature, which disprove the supposed incompatibility in the *one* case, disprove it also in the other. Even *matter* itself, we have seen, may, *without the slightest alteration of its identity*, exist *in an almost infinite variety of states*; having, in some of these states, qualities precisely the reverse of those, which it exhibited in other states, *attracting* what it *repelled*, *repelling* what it *attracted*;—and it surely is not *more* wonderful, therefore, that

the *same identical mind*, also, should, in relation to the same objects, in different circumstances, be susceptible of *an almost infinite variety of affections*,—approving, disapproving, choosing, repenting. If we knew nothing more of the relations of two billiard balls to each other, than the phenomena which they exhibit, in the moment of their mutual percussion, when they have been *forced*, within a certain degree of close *vicinity*, by the impelling stroke, we should regard them, from their instant *reciprocal repulsion*, as having a *natural* tendency *to fly off from each other*; and, in the state in which they *then* exist, there is no question that such *is* their tendency,—a tendency, which, *in these circumstances*, may be regarded as their *genuine physical character*. Yet we have only to imagine the two balls placed at a distance from each other, like that of the remotest planet from the sun; and, in traversing the whole wide void that intervenes, what a different physical character would they exhibit, in their accelerating tendency toward each other, as if their very nature were lastingly changed? If there are, then, such opposite tendencies in the same *bodies*, without any loss of identity, why may not the same minds also have *their* opposite tendencies, when, in like manner, *removed, as it were, into circumstances that are different*, loving, perhaps, what they hated before, and hating what they loved? If the *change of state* be not *temporary*, but *permanent*, the resulting *affections* may well be supposed to be permanently different; and, indeed, if they be different at all, *cannot but be* permanently different, like the altered

state. It is as little wonderful, therefore, when any lasting change of circumstances is taken into account, that the same individual should no longer exhibit the same intellectual and moral appearances, as that matter, in its different states, should no longer exhibit the same obvious phenomena, *attracting*, perhaps, the very bodies which it before repelled, and *repelling* the very bodies which it before attracted, and attracting and repelling with differences of force, and consequent differences of velocity in the bodies moved, the varieties of which it would require all the powers of our arithmetic to compute.

When we observe, then, in a mind, which we have long known and valued, any marks of *altered character*,—when, for example, in one, who, by the favour, or rather by the cruelty of Fortune, has been raised, from a situation comparatively humble, to sudden distinctions of power and opulence, we see the neglect of all those virtues, the wider opportunity of exercising which seemed to him formerly the *chief*, or even the *only*, advantage that rendered such distinctions desirable,—the same frivolous vanity, which before appeared to him ridiculous in others, and the same contemptuous insolence of pride, which before appeared to him *contemptible*,—a craving and impatient desire of greater wealth, merely because he has no longer any use to make of it, unless, indeed, that it has become more necessary to his *avarice*, than it ever was before to his *want*,—and a gay and scornful indifference to miseries, that are still *sometimes* able to *force* themselves upon his view, the relief of which, that once seemed to him so glo-

rious a privilege, would *now* not require of him even the scanty merit of sacrificing a single superfluity:—When we perceive this contrast, and almost say within ourselves, Is this the same being? we should remember, that the influence of fortune is not confined to the mere *trapping*, which it gives or takes away,—that it operates *within* as much as *without*,—and that, accordingly, in the case now imagined by us, the new external circumstances have been gradually *modifying* the mind, in the same manner, as new external circumstances of a different kind modify the *bodies*, which happen to be placed in them,—not affecting their *identity*, but altering their *state*; and that, if we could distinguish, as accurately, the series of changes, which take place in *mind*, as we can distinguish those which take place in *matter*, we should not be more astonished, that, in circumstances of rare and unhappy occurrence, a disposition once apparently generous is generous no more, than we are to observe a *body*, attracted to another body, at one distance, and afterwards repelled from it, in consequence merely of a change of their mutual position,—a change so *very* slight, as to be altogether undistinguishable by our senses.

I have dwelt on this question at much greater length than I should otherwise have done, however interesting it truly is as a question of metaphysics, because I was anxious to obviate a prejudice which is very closely connected with this point, and which, most unfortunately for the progress of the Philosophy of Mind, has given a wrong bias to the speculations of many very enlightened men. No one, I am

aware, can be so sincerely sceptical as to doubt, even for a moment, his own identity, *as one continued sentient being*, whatever ingenious sophistry he may urge in support of the paradox which he *professes* to hold. But still, while the compatibility of diversity with absolute *identity*, as now explained to you, was but obscurely felt,—a compatibility which, to the best of my remembrance, no writer, with whom I am acquainted, has attempted to illustrate,—the difficulty of reconciling the *growth* or *decay* of *knowledge*, and all the successive *contrasts or changes of feeling*, which our sensations, thoughts, emotions, exhibit, with the *permanent indivisible unity* of the *same sentient principle*, has been sufficient, in many cases, to produce a vague and almost unconscious tendency to materialism, in minds that would not otherwise have been easily led away by a system so illusive; and, where it has not produced this *full* effect, it has at least produced a tendency, in many cases, to *encumber* the simple theory of the mental phenomena with false and unnecessary *hypotheses*, very much akin to those of absolute materialism. Without this absolute materialism, *mind* must still be *left*, indeed, as the *ultimate* subject of sensation, and the difficulty *truly* remains the same; but it is contrived to complicate, as much as possible, the *corporeal* part of the process, which precedes this ultimate *mental* part, by the introduction of phantasms, or other shadowy films, animal spirits, vibratiuncles, or other sensorial motions, that a wider room may thus be left for *a play of changes*, and the difficulty of accounting for the diversity of sensations be *less*

felt, when it is to be divided among so many substances in almost constant motion; while the attention is, at the same time, led away from *the immediate mental change*, in which alone the supposed difficulty consists, to the mere *corpuscular changes*, in which there is no supposed difficulty.

It is a general law of our *internal*, as well as of our *external* perceptions, that we distinguish most readily what is least complicated. In a chorus of many voices, a single discordant voice may escape even a nice discriminator of musical sounds, who would have detected instantly the slightest deviation from the melody of a simple air. A juggler, when he wishes to withdraw a single card, is careful to present to us *many*; and, though the card which he withdraws is truly before our eyes at the very moment at which he separates it from the pack, we do not discover the quick motion which separates it, however suspiciously watchful we may be, because our vigilance of attention is *distracted* by the number of cards which he suffers to remain. It is not because the card which he removes is not before us, then, that we do not observe the removal of it, but because it is only one of many that are before us. It is precisely the same in those complicated *material* processes, with which some theorists encumber the simple phenomena of the mind. The difficulty which seems, to them, to attend any diversity whatever in a substance that is identical, simple, indivisible, and incapable of addition or subtraction, remains, indeed, ultimately in all its force, and would strike us equally, if this supposed difficulty were to

be considered *alone*. But many hypothetical vibrations, or other motions, are given to our consideration at the same moment, that glance upon our mental view like the rapid movements of the juggler's hand. We, therefore, do not feel so painfully as before a difficulty which occupies our attention only in part; and, in our feeble estimation of things, to render a difficulty *less visible* to us, is almost like a diminution of the difficulty itself.

For obviating this tendency to *materialism*, or to what may be considered almost as a species of *semi-materialism* in the physiology of the mind, it is of no small consequence to have accurate views of the nature of our mental identity. Above all, it is of importance, that we should be sufficiently impressed with the conviction, that *absolute identity*, far from *excluding every sort of diversity*, is perfectly *compatible*, as we have seen, with *diversities that are almost infinite*. When we have once obtained a clear view of this compatibility, as independent of any *additions* or *subtractions* of *substance*, we shall no longer be led to convert our simple mental operations into *long continued processes*, of which the *last* links only are *mental*, and the preceding imaginary links *corporeal*; as if the introduction of all this *play of hypotheses* were *necessary* for *saving* that *identity of mind*, which we are perhaps unwilling to abandon altogether; for it will then appear to us not more wonderful, that the *mind*, without the slightest loss of identity, should at one moment begin to exist in the state which constitutes the sensation of the fragrance of a rose, and at another

moment should begin to exist in the state which constitutes the sensation of the sound of a flute, or in the opposite states of *love* and *hate*, *rapture* and *agony*,—than that the same *body*, without the slightest change of *its* identity, should exist, at one moment, in the state which constitutes the tendency to approach another body, and at another moment in the opposite state which constitutes the tendency to fly from it, or that, with the same absolute identity, it should exist, at different moments, in the different states, which constitute the tendencies to begin motion in directions that are at right angles to each other, so as to begin to move in the one case *north*, in the other *east*, and to continue this motion, at one time with one velocity, at other times with other velocities, and consequently, with other tendencies to motion that are infinite, or almost infinite.

With these remarks, I conclude what appears to me to be the most *accurate* view of the question of our *personal*, or, as I have rather chosen to term it, our *mental identity*. We have seen, that the belief of this arises, not from any *inference of reasoning*, but from a *principle of intuitive assent*, operating *universally*, *immediately*, *irresistibly*, and therefore justly to be regarded, as *essential to our constitution*,—a principle, exactly of the same kind, as those, to which reasoning itself must ultimately be traced, and from which alone its *consecutive series of propositions* can derive any *authority*. We have seen, that this belief,—though intuitive,—is not *involved* in any *one* of our *separate feelings*, which, *considered merely as present*, might suc-

ceed each other, in endless variety, without affording any notion of *a sentient being, more* permanent, than the sensation itself; but that it arises, on the consideration of our feelings *as successive*, in the same manner, as our belief of *proportion*, or *relation in general*, arises, not from the conception of *one* of the related objects or ideas, but only after the previous conception of *both* the *relative* and the *correlative*; or rather, that the belief of *identity* does not *arise* as *subsequent*, but is *involved* in the *very remembrance which allows us to consider* our feelings *as successive*; since it is impossible for us to regard them *as successive*, without regarding them *as feelings of our sentient self*;—not flowing, therefore, from *experience* or *reasoning*, but *essential* to these, and necessarily *implied* in them,—since there can be no *result in experience*, but to the mind which remembers that *it* has *previously observed*, and no *reasoning* but to the mind which remembers that *it* has felt the truth of some proposition, from which the truth of its present conclusion is derived. In addition to this positive evidence of our identity, we have seen, that the strongest *objections* which we could imagine to be urged against it, are, as might have been expected, *sophistical*, in the false test of identity which they assume,—that the contrasts of momentary feeling, and even the more permanent alterations of general character, in the same individual, afford no valid argument against it; since, not in *mind only*, but in *matter also*,—(from a superficial and partial view of the phenomena of which the supposed objections are derived,)—the

most complete *identity of substance, without addition of any thing, or subtraction of any thing*, is compatible with an infinite *diversity of states*.

I cannot quit the subject of identity, however,—though, from my belief of its importance, I may already, perhaps, have dwelt upon it too long,—without giving you some slight account of the very strange opinions of Mr Locke on the subject. I do this, both because some notice is due, to the *paradoxes*,—even though they be erroneous,—of so illustrious a man, and because I conceive it to be of great advantage, to point out to you occasionally the illusions, which have been able to obscure the discernment of those *bright* spirits, which nature sometimes, though sparingly, grants, to adorn at least that intellectual gloom, which *even they* cannot *irradiate;* that, in their path of glory, seem to move along the heavens by their own independent light, as if almost unconscious of the darkness below, but cannot exist there for a moment, without shedding, on the feeble and doubtful throngs beneath, some faint beams of their own incommunicable lustre. It is chiefly, as connected with these eminent names, that *fallacy* itself becomes instructive, when simply exhibited,—if this only be done, not from any wish to disparage merits, that are far above the impotence of such attempts, but with all the veneration which is due to *human excellence*, united as it must ever be to *human imperfection*. "Even the *errors* of great men," it has been said, "are fruitful of *truths*;" and, though they were to be attended with no other advantage, this one at least they must al-

ways have, that they teach us *how very possible it is for man to err;* thus lessening at once our tendency to *slavish acquiescence* in the unexamined opinions of others, and—which is much harder to be done—lessening also, as much as it is possible for any thing to lessen, the strong conviction, which we feel, that we are ourselves *unerring*.—The first, and most instructive lesson, which man can receive, when he is capable of reflection, is *to think for himself;* the second, without which the first would be comparatively of little value, is to reject, in *himself*, that infallibility, which he rejects in *others*.

The opinion of Locke, with respect to personal identity, is, that it consists in *consciousness alone;* by which term, in its reference to the past, he can mean nothing more than *perfect memory*. *As far back as* we are conscious, or remember; *so far*, and no farther, he says, are we *the same persons*. In short, what we do not remember, *we*, as persons, strictly speaking, *never did*. The identity of *that which remembers*, and which is surely independent of the remembrance itself, is thus made to consist in the remembrance, that is confessedly fugitive; and, as if that every possible inconsistency might be crowded together in this simple doctrine, the same philosopher, who holds, that our personal identity *consists in consciousness*, is one of the most strenuous opponents of the doctrine, that the soul *always thinks, or is conscious;* so that, in this interval of thought, from consciousness to consciousness,—since that which is essential to identity is, by supposition, suspended, the same identical soul, as far as indivi-

dual personality is concerned, is not the same identical soul, but exists when it does not exist.

"There is another consequence of this doctrine," says Dr Reid, "which follows no less necessarily, though Mr Locke probably did not see it. It is, that a man may be, and at the same time not be, the person that did a particular action.

"Suppose a brave Officer to have been flogged when a boy at school, for robbing an orchard, to have taken a standard from the enemy in his first campaign, and to have been made a General in advanced life: Suppose also, which must be admitted to be possible, that when he took the standard, he was conscious of his having been flogged at school; and that when made a General, he was conscious of his taking the standard, but had absolutely lost the consciousness of his flogging.

"These things being supposed, it follows, from Mr Locke's doctrine, that he who was flogged at school is the same person who took the standard; and that he who took the standard is the same person who was made a General. Whence it follows, if there be any truth in logic, that the General is the same person with him who was flogged at school. But the General's consciousness does not reach so far back as his flogging, therefore, according to Mr Locke's doctrine, he is not the person who was flogged. Therefore the General is, and at the same time is not, the same person with him who was flogged at school." *

* Reid's Essays on the Intellectual Powers, Essay III. Chap. vi.

But it is needless to deduce consequences, from this very strange paradox; since its author himself has done this, most freely and fully, and often with an air of pleasantry, that, but for the place in which we find it, as forming a part of a grave methodical essay on the understanding, would almost lead us to think, that he was himself smiling, in secret, at his own doctrine, and propounding it with the same mock solemnity with which the discoverer of Laputa has revealed to us all the secrets of the philosophy of that island of philosophers.

He allows it to follow, from his doctrine, that, if we remembered *at night, and never but at night,* one set of the events of our life; as, for instance, those which happened five years ago; and never but in the day time, that different set of events, which happened six years ago; this, "day and night man," to use his own phrase, would be *two* as distinct *persons,* as Socrates and Plato; and, in short, that we are truly as many persons as we have, or can be supposed to have, at different times, separate and distinct remembrances of different series of events. In this case, indeed, he makes a distinction of the visible *man,* who is the same, and of the *person* who is different.

"But yet possibly it will still be objected," he says, "suppose I wholly lose the memory of some parts of my life, beyond a possibility of retrieving them, so that perhaps I shall never be conscious of them again; yet am I not the same person that did those actions, had those thoughts that I once was conscious of, though I have now forgot them? To which I an-

swer, that we must here take notice what the word I is applied to; which, in this case, is the man only. And the same man being presumed to be the same person, I is easily here supposed to stand also for the same person. But if it be possible for the same man to have distinct incommunicable consciousness at different times, it is past doubt the same man would at different times make different persons; which, we see, is the sense of mankind in the solemnest declaration of their opinions; human laws not punishing the mad man for the sober man's actions, nor the sober man for what the mad man did, thereby making them two persons: which is somewhat explained by our way of speaking in English, when we say such an one is not himself, or is beside himself; in which phrases it is insinuated, as if those who now, or at least first used them, thought that self was changed, the self-same person was no longer in that man." *

Such is the doctrine of a philosopher, whose intellectual excellence was unquestionably of the highest rank, and whose powers might be considered as entitling him to exemption, at least, from those *gross errors* which far weaker understandings are capable of discovering, *if* even this humble relative privilege had not been too great for man. He contends, that our remembrance of having done a certain action, is not merely to us, the rememberers, the *evidence* by which *we believe that we were the persons who did it,* but is the very circumstance

* Essay concerning Human Understanding, B. ii. c. xxvii. sect. 20.

that makes us personally to have done it,—a doctrine, which, if the word person were to be understood in the slightest degree in its common acceptation, would involve, as has been justly said, an absurdity as great as if it had been affirmed, that our *belief* of the creation of the world actually made it to *have been created*.

If we could suppose Mr Locke to have never thought on the subject of personal identity, till this strange doctrine, and its consequences, were stated to him by another, it may almost be taken for granted, that he would not have failed instantly to discover its absurdity, as a mere verbal paradox; and, yet, after much reflection on the subject, he does not perceive that very absurdity, which he would have discovered, *but for reflection*. Such is the strange nature of our intellectual constitution. The very functions, that, in their daily and hourly exercise, save us from innumerable errors, sometimes lead us into errors, which, but for them, we might have avoided. The philosopher is like a well armed and practised warrior, who, in his helmet and coat of mail, goes to the combat with surer means of victory, than the ill disciplined and defenceless mob around him, but who may yet sometimes fall where others would have stood, unable to rise and extricate himself, from the incumbrance of that very armour, to which he has owed the conquests of many other fields.

What, then, may we conceive to have been the nature of the illusion, which could lead a mind like that of Mr Locke, to admit, *after reflection*, an ab-

surd paradox, and all its absurd consequences, which, *before reflection*, he would have rejected?

It is to be traced chiefly, I conceive, to a source which is certainly the most abundant source of error in the writings and silent reflections of philosophers, especially of those who are gifted with originality of thought,—the ambiguity of the language they use, when they retain a word with one meaning, which is generally understood in a different sense; the common meaning, in the course of their speculations, often mingling insensibly with their own, and thus producing a sort of confusion, which incapacitates them from perceiving the precise consequences of either. Mr Locke gives his own definition of the word *person*, as *comprised* in the *very consciousness* which he supposes to be all that is essential to personal identity; or at least he speaks of consciousness so vaguely and indefinitely, as to allow this meaning of his definition to be present to his own mind, as often as he thought of personality. "To find," he says, "wherein personal identity consists, we must consider what *person* stands for; which, I think, is a thinking intelligent being, that has reason and reflection, *and can consider itself as itself*, the *same thinking thing, in different times and places*, which it does *only by that consciousness*, which is inseparable from thinking."*

Having once given this definition of a person, there can be no question, that personal identity, in *his* sense, is wherever *consciousness* is, and *only*

* Essay concerning Human Understanding, B. ii. c. xxvii. sect. 9.

where consciousness is. But this is true of *a person*, only as defined by *him;* and, if strictly analysed, means nothing more, than that *consciousness is wherever consciousness is*,—a doctrine, on which, certainly, he could not have thought it worth his while to give any very long commentary. It appears more impoftant, however, even to himself, and worthy of the long commentary which he has given it, because, in truth, he cannot refrain from still keeping, in his own mind, some obscure impression of the more common meaning of the term, and extending to a *person*, as thus commonly understood, what is true only of a person, *as defined by him.* It is as if some whimsical naturalist should give a definition of the word *animal*, exclusive of every winged creature, and should then think that he was propounding a very notable and subtile paradox, in affirming that *no animal is capable of rising for a few minutes above the surface of the earth.* It would be a paradox, only inasmuch as it might suggest to those who heard it, a meaning *different* from that of the definition; and, but for this misconception, which the author of it himself might share, would be so insignificant a truism, as not to deserve even the humblest of all praise, that of amusing absurdity.

When, in such cases as this, we discover that singular inconsistency, which is to be found even in the very *excellence* of every thing that is *human*,—the perspicacity which sees, at an immeasurable distance, in the field of inquiry, what no other eye has seen, and which yet, in the very objects which it has grasped, is unable to distinguish what is visible to

common eyes, are we to lament the imperfection of our mental constitution, which leaves us liable to such error? Or, as in other instances, in which, from our incapacity of judging rightly, we are tempted at first to regret the present arrangement of things, are we not rather to *rejoice* that we are so constituted by nature? If man had not been formed to *err*, in the same manner as he is formed to *reason*, and to *know*, that perfect system of faculties, which excluded error, must have rendered his discernment too quick, not to seize instantly innumerable truths, the gradual discovery of which, by the exercise of his present more limited faculties, has been sufficient to give glory and happiness to whole ages of philosophical inquiry. If, indeed, the field had been absolutely boundless, he might still have continued to *advance*, as at present, though with more gigantic step, and more searching vision, and found no termination to his unlimited career. But the truths which relate to us physically, on this bounded scene of things in which we are placed, numerous as they are, are still in some measure finite, like that scene itself; and the too rapid discoveries, therefore, of a few generations, as to the most important properties of things, would have left little more for the generations which were to follow, than the dull and spiritless task of learning what others had previously learned, or of teaching what themselves had been taught.

Philosophy is not the mere *passive possession* of knowledge; it is, in a much more important respect, *the active exercise of acquiring it.* We may truly apply to it what Pascal says of the conduct of

life in general. "We think," says he, "that we are seeking *repose*, and all which we are seeking is *agitation*." In like manner, we think that it is *truth* itself which we seek, when the happiness which we are to feel *most strongly*, is in the mere *search*; and all that would be necessary, in many cases, to make the object of it appear indifferent, would be to put it *fairly within our grasp*.

> "Our hopes, like towering falcons, aim
> At objects in an airy height;
> But all the pleasure of the game,
> Is afar off to view the flight."

What little value do we set on discoveries that have been long familiar to us, though their *own essential value* must still continue the same. Even on the *whole mass* of knowledge, that has been gradually and slowly transmitted to us, we reflect with little interest, unless as it may lead to something yet unknown; and the result of a single new experiment, which bears no proportion to the mass to which it is added, will yet be sufficient to *rouse* and *delight* every philosopher in Europe. It is a very shrewd remark of a French writer, in reference to the torpor, which the most zealous inquirer feels, as to every thing which he *knows*, and his insatiable avidity for every thing which he *does not know*, that "if Truth were fairly to show herself as she is, all would be ruined; but it is plain, that she knows very well, of how great importance it is, that she should keep herself out of sight."

If we were to acquire, by an unhappy foresight,

the knowledge which is not yet ours, it is very evident, that we must soon regard it, in the same manner, as the *knowledge which we have already acquired.* The charm of novelty, the delights of gratified curiosity, would not be for us. The prey would be at our feet; and it would be vain, therefore, to expect that ardour of soul, which is kindled, amid the hopes and the fears, the tumult and the competition of the chace.

"If man were *omnipotent*, without being *God*," says Rousseau, "he would be a miserable creature: he would be deprived of the pleasure of *desiring*; and what privation would be so difficult to be borne!" It may be said, at least with equal truth, that, if man were *omniscient*, without the other perfections of the Divinity, he would be far less happy than at present. To infinite benevolence, indeed, accompanied with infinite power, a corresponding infinity of knowledge must afford the highest of all imaginable gratifications, by its subservience to those gracious plans of good, which are manifested in the universe, and which, in making known to us the existence of the Supreme Being, have made him known to us, as the object of grateful love and admiration. But if, in other respects, we were to continue *as at present*,—with our erring passions, and moral weaknesses of every sort,—to be doomed to *have nothing to learn*, would be a punishment, not a blessing. In such circumstances, if they were to continue for ever, the annihilation of our intellectual being would not be an evil so great, as the mere extinction of our curiosity, and of all the delights and consolations which

it affords, not merely when we gratify it, but when we are merely *seeking* to gratify it.

> "Else wherefore burns,
> In mortal bosoms, this unquenched hope,
> That breathes from day to day sublimer things,
> And mocks possession? Wherefore darts the mind,
> With such resistless ardour, to embrace
> Majestic forms, impatient to be free,
> Proud of the strong contention of her toils,
> Proud to be daring?"*—
>
> "Why departs she wide†
> From the dull track and journey of her times,
> To grasp the good she knows not? In the field
> Of things which may be, in the spacious field
> Of science, potent arts, or dreadful arms,
> To raise up scenes, in which her own desires
> Contented may repose,—when things which are
> Pall on her temper like a twice told tale."‡

It is sufficient, that we are endowed with powers of discovery. Our gratitude is due to Heaven for the gift; and the more due for that gracious wisdom, which has known how to *limit* the powers which it gave, so as to produce a greater result of good by the very limitation. Our prejudices, which sometimes forbid reasoning, and the errors, to which our imperfect reasoning often leads us, we should consider, when all their remote relations are taken into ac-

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* Pleasures of Imagination, (first form of the Poem,) B. i. v. 166—171. 173—5.

† —— Why departs the soul
Wide from the track.—*Orig.*

‡ Pleasures of Imagination, (second form of the Poem,) B. i. v. 213—220.

count, as indirect sources of happiness; and though we may wish, and justly wish, to analyze them, and to rise above their influence,—for, without this exertion, and consequent feeling of progress, on our part, they would be *evil* rather than *good*,—we must not forget, that it is to them we owe the luxury, which the immediate analysis affords, and the acquisition of the innumerable truths, which the prevalence of these errors, in past ages, has left to be discovered by the ages which succeed.

In this, and in every thing which relates to man, Nature has had in view, not the *individual* or the *single generation* only, but the *permanent race*. She has, therefore, not exhausted her bounty on any one period of the long succession; but, by a provision, which makes our very weakness instrumental to her goodness, she has given to all, that distant and ever-brightening hope, which, till we arrive at our glorious destination,

> "Leads from goal to goal,
> And opens still, and opens on the soul."

With enough of *mental vigour* to advance still farther in the tracks of science that are already formed, and to point out new tracks to those who are to follow, we have enough of *weakness* to prevent us from exploring and exhausting, what is to occupy, *in the same happy search*, the millions of millions that are to succeed us. Truth itself, indeed, will always be progressive; but there will still, at every stage of the progress, be something to *discover*, and abun-

dance to *confute*. "In 24,000 years," to borrow the prediction of a very skilful prophet,—"In 24,000 years, there will arise philosophers, who will boast, that they are destroying the errors which have been reigning in the world for 30,000 years past; and there will be people who will believe, that they are *then only just beginning* to open their eyes."

In these remarks, on the nature of our varied consciousness, and on the unity and identity of the *mind* in all its *varieties*,—we have considered the mental phenomena in their *general* aspect. We have now to consider them as arranged in kindred classes,—or rather to attempt the difficult task of the classification itself.

To this I shall proceed in my next Lecture.

LECTURE XVI.

ON THE CLASSIFICATION OF THE PHENOMENA OF MIND.

AFTER considering the Phenomena of the Mind *in general*, we are now to proceed to consider them, in the *separate classes* in which they may be arranged. The phenomena themselves, indeed, are almost infinite, and it might seem, on first reflection, a very hopeless task, to attempt to reduce, under a few heads, the *innumerable* feelings, which diversify almost every moment of our life. But to those, who are acquainted with the wonders, which classification has performed, in the other sciences, the task, difficult as it is, will still seem not *absolutely hopeless;* though, in one respect, its difficulty will be more highly estimated by *them*, than by others;—since *they* only, who know the advantage of the fixed and definite nature of the objects of classification, in other sciences, can feel, how much greater the obstacles must be, to any accurate arrangement, in a science, of which the objects are indefinite, and complex, incapable of being fixed for a moment in the same state, and destroyed by the

very effort to grasp them. But, in this, as in other instances, in which Nature has given us difficulties with which to cope, she has not left us to be wholly overcome; or, if we must yield, she has at least armed us for so vigorous a struggle, that we gain additional intellectual strength, even in being vanquished. "Studiorum salutarium, etiam citra effectum, salutaris tractatio est." If she has placed us in a labyrinth, she has at the same time furnished us with a clue, which may guide us, not indeed through all its dark and intricate windings, but through those broad paths, which conduct us into day. The single power, by which we discover *resemblance* or *relation* in general, is a sufficient aid to us, in the perplexity and confusion of our first attempts at arrangement. It begins, by converting thousands, and more than thousands, into one, and, reducing, in the same manner, the numbers thus formed, it arrives at last at the few distinctive characters of those great comprehensive tribes, on which it ceases to operate, because there is nothing left, to oppress the memory, or the understanding. If there had been no such science as chemistry, who could have ventured to suppose, that the innumerable bodies, animate and inanimate, on the surface of our globe, and all, which we have been able to explore in the very depths of the earth itself, are *reducible*, and even in the imperfect state of the science, *have* been *already* reduced, to a few simple elements? The science of mind, as it is a *science of analysis*, I have more than once compared to *chemistry*, and pointed out to you, and illustrated, its various cir-

cumstances of resemblance. In *this too*, we may hope, the analogy will hold,—that, as the innumerable aggregates, in the one science, have been reduced and simplified, the innumerable complex feelings in the other will admit of a corresponding reduction and simplification.

The classes which we form, in the mental as well as in the material universe, depend, as you cannot but know, on certain relations which we discover in the phenomena; and the relations according to which objects may be arranged, are of course various, as they are considered by different individuals in different points of view. Some of these relations present themselves immediately, as if to our very glance; others are discoverable only after attentive reflection;—and though the former, merely as presenting themselves more readily, may seem, on that account, better suited for the general purpose of *arrangement*, it is not the less true that the classification, which approaches nearest to perfection, is far from being always that which is founded on relations, that seem at first sight the most *obvious*. The rudest wanderer in the fields may imagine, that the profusion of blossoms around him,—in the greater number of which he is able, himself, to discover many striking resemblances,—may be reduced into some order of arrangement. But he would be little aware, that the principle, according to which they are now universally classed, has relation, not to the parts which appear to him to constitute the whole flower, but to some small part of the blossom, which he does not perceive, at the distance at which he

passes it, and which scarcely attracts his eye, when he plucks it from the stem.

To our *mental* classifications the remark is equally applicable. In these too, the most obvious distinctions are not always those which answer best the purposes of systematic arrangement. The *phenomena of the mind*, are only *the mind itself existing in certain states*; and, as many of these states are in their nature *agreeable*, and others *disagreeable*, this difference, which is to the sentient being himself the most important of all differences, may be supposed, to afford the *most obvious* principle of classification. What is *pleasant*, what is *painful*, are perhaps the *first classes*, which the infant has formed long before he is capable of distinguishing them by a name; and the very imbecility of *idiotism* itself, to which nothing is *true* or *false*, or *right* or *wrong*,—and to which there is no future, beyond the succeeding *moment*,—is yet capable of making this *primary* distinction, and of regulating, according to it, its *momentary* desires.

"The love of pleasure is man's eldest-born,
Born in his cradle, living to his tomb.
Wisdom,—her *younger* sister, though more *grave*,
Was meant to *minister*, not to dethrone *
Imperial Pleasure, queen of human hearts." †

The distribution, which we should be inclined to make, of our mental phenomena, according to this

* Instead of "not to dethrone," the original has "and not to mar."

† Night Thoughts, viii. 595—599.

obvious principle, would be into those which are *pleasing*, those which are *painful*, and those which are *neither painful nor pleasing*. But, however obvious this *first* distinction may seem, as a principle of arrangement, the circumstances, on which the differences depend, are so very *indefinite*, that the distinction,—though it may be useful to have it in view, in its most striking and permanent cases,—cannot be adopted, as the basis of any regular system. To take the mere pleasures and pains of *sense*, for example,—to what intelligible division could we reduce these, which are not merely *fugitive in themselves*, but vary, *from pain to pleasure*, and *from pleasure to pain*, with a change of their external objects, *so slight often*, as to be scarcely *appreciable*, and, in many cases, even when the external objects have continued exactly the same? How *small*, and how *variable* a boundary separates the *warmth* which is *pleasing* from the *heat* which *pains! A certain quantity* of light is *grateful* to the eye. Increase it;—it becomes, not *indifferent*, —though that would be a *less* change,—but absolutely *painful*; and, if the eye be *inflamed*, even the small quantity of light,—which was *agreeable* before, and which seemed, therefore, to admit of being very safely classed among the sources of pleasure,—is now converted into a source of agony. Since it is impossible, therefore, to fix the limits of pain and pleasure, and every *affection* or *state* of mind, *agreeable*, *disagreeable*, or *indifferent*, may, by a very trifling change of circumstance, be converted into an *opposite* state, it is evident, that any

division, founded on this *vague* and *transient* distinction, must perplex, and mislead us, in our attempts to systematize the almost infinite diversities of thought and feeling, rather than give us any *aid* in the arrangement.

The great leading division of the mental phenomena which has met with most general adoption by philosophers, is into those which belong to the *understanding*, and those which belong to the *will*;—a division which is *very ancient*, but, though sanctioned by the approbation of many ages, *very illogical*; since the *will*, which, in this division, is *nominally opposed* to the intellect, is so far from being opposed to it in *reality*, that, even by the asserters of its diversity, it is considered as exercising, *in the intellectual department*, an empire almost as wide, as in the department allotted to itself. We *reason*, and *plan*, and *invent*, at least as *voluntarily*,—as we *esteem*, or *hate*, or *hope*, or *fear*. How many emotions are there too, which cannot, without absolute *torture*, be *forced* into *either* division! To take only a *few* instances, out of *many*,—to *what* class are we to reduce *grief*, *joy*, *admiration*, *astonishment*, which perhaps are not phenomena of the mere *understanding*, and which,—though they may lead indirectly to *desires* or volitions,—have nothing, *in themselves*, that is *voluntary*, or that can be considered as in any peculiar degree connected with the *will*. The division of the mental phenomena into those which belong to the *understanding*, and those which belong to the *will*, seems, therefore, to be as faulty, as would be the division

of *animals*, into *those which have legs* and *those which have wings*; since the *same* animals might have both *legs* and *wings*, and since whole tribes of animals have *neither one nor the other*.

Another division of the phenomena of mind, similar to the former, and of equal antiquity, since it corresponds with the very ancient division of *philosophy* into the *contemplative* and the *active*, is into those which belong to the *intellectual powers*, and those which belong to the *active powers*. "Philosophia et contemplativa est et activa; spectat simulque agit." I must confess, however, that this division of the mental phenomena, as referable to the *intellectual* and the *active* powers of the mind,—though it has the sanction of very eminent names, appears to me to be faulty, exactly in the same manner as the former, which, indeed, it may be considered almost as *representing*, under a *change of name*. Its parts are not *opposed* to each other, and it does not include *all* the phenomena which it *should* include. Is *mere grief*, for example, or *mere astonishment*, to be referred to our intellectual or to our active powers? I do not speak of the *faculties* which they *may* or *may not* call into action; but of *the feelings themselves*, as present *phenomena* or *states* of the mind. And, in whatsoever manner we may define the term *active*, is the mind *more active*, when it merely desires good and fears evil, when it looks with *esteem* on *virtue*, and with *indignation*, or *disgust*, and *contempt* on *vice*, than when it pursues a continued train of *reasoning*, or *fancy*, or *historical investigation*? when, with Newton, it lays

down the laws of planetary motion, and calculates, in what exact point of the heavens, any one of the orbs, which move within the immense range of our solar system, will be found to have its place at any particular moment, *one thousand years hereafter;* when, with Shakespeare, it wanders beyond the universe itself, calling races of beings into existence, which nature never *knew*, but which nature might almost *own*—or when, with Tacitus, it enrolls slowly, year after year, that dreadful *reality* of crimes and sufferings, which even *dramatic* horror, in all its license of wild imagination, can scarcely reach—the long unvarying catalogue, of tyrants,—and executioners,—and victims, that return thanks to the gods and die,—and accusers rich with their blood, and more mighty, as more widely hated, amid the multitudes of prostrate slaves, still looking whether there may not *yet* have escaped some *lingering virtue*, which it may be a merit to destroy, and having scarcely leisure to feel even the agonies of remorse, in the continued sense of the precariousness of their own gloomy existence? When it thus *records, the warning lessons of the past*, or *expatiates in fields, which itself creates*, of fairy beauty or sublimity, or *comprehends whole moving worlds within its glance, and calculates and measures infinitude*—the mind is surely active, or there are no moments in which it is so. So little, indeed, are the *intellectual* powers *opposed* to the active, that it is *only* when some *intellectual* energy co-exists with desire, that the mind is said to be *active*, even by those who are unaccustomed to analytical inquiries, or to metaphysical no-

menclature. The *love of power*, or the *love of glory*, when there is no opportunity of intellectual exertion, may, in the common acceptation of the word, be as *passive* as *tranquillity itself*. The *passion* is *active* only when, with *intellectual action*, it compares means with ends, and different means with each other, and *deliberates*, and *resolves*, and *executes*. Chain some revolutionary usurper to the floor of a dungeon, his *ambition* may be *active still*, because he may still be *intellectually busy* in *planning means of deliverance and vengeance*; and, on his bed of straw, may conquer half the world. But, if we could fetter his *reason* and *fancy*, as we can fetter his *limbs*, *what activity would remain*, though he were still to feel *that mere desire of power or glory*, which, though usually followed by intellectual exertion, is itself, *as prior to these exertions*, all that constitutes *ambition*, as a *passion*? There would, indeed, still be in his mind the *awful elements* of that force, which bursts upon the world with conflagration and destruction; but, though there would be the *thunder*, it would be *the thunder sleeping in its cloud*. To *will*, is to *act* with desire; and, unless in the production of mere muscular motion, it is only *intellectually* that we can *act*. To class the active powers, therefore, as distinct from the *intellectual*, is to class them, *as opposed to that*, without which, as *active powers*, they cannot even *exist*.

It may, certainly, be contended, that, though the mental phenomena, usually ranked under this head, are not *immediately* connected with *action*, they may yet deserve this generic distinction, as leading to ac-

tion *indirectly*,—and *if* they led, in any peculiar sense, to action, *however indirectly*, the claim might be allowed. But, even with this limited meaning, it is impossible to admit the distinction asserted for them. In what sense, for example, can it be said, that *grief* and *joy*, which surely are not to be classed under the *intellectual powers of the mind*, lead to action even indirectly, more than any other feelings, or states, in which the mind is capable of existing? We *may*, indeed, *act* when we are joyful or sorrowful, as we may act when we perceive a present object, or remember the past; but we *may* also remain at rest, and remain equally at rest, in the one case, as in the other. Our intellectual energies, indeed, even in this sense, as *indirectly leading to action*, are, in most cases, far more *active*, than sorrow, even in its very excess of agony and despair; and, in those cases in which sorrow *does* truly lead to action, as when we strive to remedy the past, the *mere regret* which constitutes the sorrow, is not so *closely* connected with the conduct which we pursue, as the intellectual states of mind that intervened—the successive judgments, by which we have *compared* projects with projects, and chosen at last the *plan*, which, in relation to the object in view, has seemed to us, upon the whole, the most expedient.

If, then, as I cannot but think, the arrangement of the mental phenomena, as belonging to two classes of powers, the *intellectual* and the *active*, be at once *incomplete*, and not accurate, even to the extent to which it reaches, it may be worth while to

try at least some other division, even though there should not be any very great hope of success. Though we should fail in our endeavour to obtain some more precise and comprehensive principle of arrangement, there is also *some* advantage gained, by viewing objects, *according to new circumstances of agreement or analogy*. We see, in this case, what had long passed before us unobserved, while we were accustomed only to the order and nomenclature of a former method; for, when the mind has been habituated to certain classifications, it is apt, in considering objects, to give its attention only to those properties which are essential to the classification, and to *overlook*, or at least *comparatively to neglect*, *other* properties equally important and essential to the very nature of the separate substances that are classed, *but not included in the system as characters of generic resemblance*. The individual object, indeed, when its place in any system has been long fixed and familiar to us, is probably conceived by us less, *as* an *individual*, than as *one of a class of individuals*, that agree in certain respects, and the frequent consideration of it, *as one of a class*, *must* fix the peculiar relations of the class, more strongly in the mind, and weaken proportionally the impression of every other quality that is not so included. A *new classification*, therefore, which includes, in its generic character, *those neglected qualities*, will of course draw to them attention, which they could not otherwise have obtained; and, the *more various* the views are, which we take of the objects of any science, the *juster* consequently, because the *more equal*, will be the esti-

mate which we form of them. So truly is this the case, that I am convinced, that no one has ever read over the mere terms of a new division, in a science, however familiar the science may have been to him, without learning *more* than this new division itself, without being struck with some *property* or *relation*, the importance of which he *now* perceives most clearly, and which he is quite astonished *that he should have overlooked so long before.*

I surely need not warn you, after the observations which I made in my Introductory Lectures, on the Laws and Objects of Physical Inquiry in General, that every *classification* has reference only to our *mode of considering objects;* and that, amid all the varieties of systems which our love of novelty, and our love of distinction, or our pure love of truth and order may introduce, the phenomena themselves, whether accurately, or inaccurately classed, continue unaltered. The mind is formed susceptible of certain affections. These states or affections we may generalize more or less; and, according to our generalization, may give them more or fewer names. But whatever may be the extent of our vocabulary, the mind itself,—as independent of these transient designations, as He who fixed its constitution,—still continues to exhibit the same unaltered susceptibilities, which it originally received; as the flowers, which the same divine Author formed, spring up, in the same manner, observing the same seasons, and spreading to the sun the same foliage and blossoms, whatever be the system and the corresponding nomenclature according to which botanists may have

agreed to rank and name their tribes. The great Preserver of nature has not trusted us, with the dangerous power of altering a single physical law which He has established, though He has given us unlimited power over the *language* which is of our own creation. It is still with *us*, as it was with our common sire in the original birthplace of our race. The Almighty *presents to us* all the objects that surround us, wherever we turn our view; but He presents them to us, *only that we may give them names*. Their *powers* and *susceptibilities* they already possess, and we cannot alter *these*, even as they exist in a *single atom*.

It may, perhaps, seem absurd, even to *suppose*, that we should think ourselves able to change, by a few generic words, the properties of the substances which we have classed; and if the question were put to us, as to this effect of our language, in any particular case, there can be no doubt, that we should answer in the negative, and express astonishment that such a question *should* have been put. But the illusion is not the *less* certain, because we are not aware of its influence; and, indeed, it could no longer *be* an illusion, *if* we were completely aware of it. It requires, however, only a very little reflection on what has passed in our own minds, to discover, that, when we have given a *name* to any *quality*, that quality acquires immediately, in our imagination, *a comparative importance*, very different from what it had before; and though nature *in itself* be *truly unchanged*, it is ever after, *relatively to our conception*, different. A difference of words is, in this

case, more than a mere *verbal* difference. Though it be not the expression of a difference of doctrine, it very speedily becomes so. Hence it is, that the same warfare, which the rivalries of individual ambition, or the opposite interests, or supposed opposite interests, of nations have produced, in the great theatre of civil history, have been produced, in the small but tumultuous field of science, by the supposed incompatibility of *a few abstract terms*; and, indeed, as has been truly said, the sects of philosophers have combated, with more persevering violence, *to settle what they mean by the constitution of the world*, than all the conquerors of the world have done to render themselves its masters.

Still less, I trust, is it necessary to repeat the warning, already so often repeated, that you are not to conceive, that any classification of the states or affections of the mind, *as referable to certain powers or susceptibilities*, makes these powers any thing different and separate from the mind itself, as originally and essentially susceptible of the various modifications, of which these powers are only a shorter name. And yet what innumerable controversies in philosophy have arisen, and are still frequently arising, *from this very mistake*, strange and absurd as the mistake may seem. No sooner, for example, were certain affections of the mind classed together, as belonging to the *will*, and certain others, as belonging to the *understanding*,—that is to say, no sooner was the *mind*, existing in certain *states*, denominated the *understanding*, and in certain *other*

states denominated the will,—than the *understanding* and the *will* ceased to be considered as the same individual substance, and became immediately, as it were, *two opposite* and *contending powers*, in the empire of mind, as distinct, as any two sovereigns, with their separate nations under their controul; and it became an object of as fierce contention to determine, whether certain affections of the mind *belonged* to the *understanding*, or to the *will*, as, in the management of political affairs, to determine, whether a disputed province belonged to one potentate, or to another. Every new diversity of the faculties of the mind, indeed, converted each faculty into a *little independent mind*,—as if the original mind were like that wonderful animal, of which naturalists tell us, that may be cut into an almost infinite number of parts, each of which becomes a polypus, as perfect as that from which it was separated. The only difference is, that those who make us acquainted with this wonderful property of the *polypus*, acknowledge the *divisibility* of the *parent animal*; while those, who assert the spiritual multiplicity, are at the same time assertors of the *absolute indivisibility of that which they divide*.

After these warnings, then, which, I trust, have been almost superfluous, let us now endeavour to form some classification of the mental phenomena, without considering, whether our arrangement be *similar* or *dissimilar* to that of others. In short, let us forget, as much as possible, that any prior arrangements have been made, and think of the phe-

nomena only. It would, indeed, require more than human vision, to comprehend all these phenomena of the mind, in our gaze, at once,—

> " To survey,
> Stretch'd out beneath us, all the mazy tracts
> Of passion and opinion,—like a waste
> Of sands, and flowery lawns, and tangling woods,
> Where mortals roam bewilder'd."

But there is a mode of bringing all this multitude of objects, within the sphere of our narrow sight, in the same manner, as the expanse of landscape, over which the eye would be long in wandering,—the plains, and hills, and woods, and waterfalls,—may be brought, by human art, within the compass of a mirror, *far less* than the *smallest* of the innumerable objects which it represents.

The process of *gradual generalizing*, by which this reduction is performed, I have already explained to you. Let us now proceed to avail ourselves of it.

All the feelings and thoughts of the mind, I have already frequently repeated, are only the mind itself existing in certain states. To these successive states our knowledge of the mind, and consequently our arrangements, which can comprehend only what we know, are necessarily limited. With this simple word *state*, I use the phrase *affection* of mind as synonymous, to express the momentary feeling, whatever it may be,—with this difference only, that the word *affection* seems to me better suited for expressing

that momentary feeling, when considered as an *effect*,—the feeling itself as a state of the mind, and the relation which any particular state of mind may bear to the preceding circumstances, whatever they may be that have induced it. Our *states of mind*, however, or our *affections of mind*, are the simplest terms, which I can use for expressing the whole series of phenomena of the mind in all their diversity, as existing phenomena, without any mixture of hypothesis, as to the particular mode in which the successive changes may be supposed to arise.

When we consider, then, the *various states or affections of the mind*, which form this series, *one* circumstance of difference *must* strike us, that some of them arise *immediately*, in *consequence of the presence of external objects*,—and some, as immediately, *in consequence of certain preceding affections of the mind itself*. The one set, therefore, are obviously the result of the laws *both of matter and of mind*,—implying, *in external objects, a power of affecting the mind*, as well as, in the *mind, a susceptibility of being affected by them*. The *other* set result from *the susceptibilities of the mind itself*, which has been formed by its divine Author *to exist in certain states*, and *to exist in these in a certain relative order of succession*. The affections of the one class arise, *because some external object is present*;—the affections of the other class arise, because some *previous* change in the states of the mind has taken place.

To illustrate this distinction by example, let us

suppose ourselves, in walking across a lawn, to turn our eyes to a particular *point*, and to *perceive there an oak*. That is to say, *the presence of the oak*, or rather of the *light* reflected from it, *occasions a certain new state of the mind*, which we call a sensation of *vision*,—an affection, which belongs to the mind alone, indeed, but of which we have every reason to suppose, that the mind, *of itself*, without the presence of light, would not have been the subject. The peculiar sensation, therefore, is the *result of the presence of the light reflected from the oak*; and we perceive it, *because the mind is capable of being affected by external things*. But *this* affection of the mind, which has an external object for its immediate cause, is not the *only* mental change which takes place. *Other* changes succeed it, without any other external impression. We *compare* the oak with some other tree which we have seen before, and we are struck with its superior magnificence and beauty;—we imagine how some scene more familiar to us would appear, if it were adorned with this tree, and how the scene before us would appear, if it were stripped of it;—we think of the number of years, which must have passed, *since the oak was an acorn*;—and we moralize, perhaps, on the changes, which have taken place, in the little history of ourselves and our friends, and, still more, on the revolutions of kingdoms,—and the birth and decay of a whole generation of mankind,—while *it* has been silently and regularly advancing to maturity, through the sunshine and the storm. Of all the *variety of states*

of the mind, which these processes of thought involve, the only one, which can be ascribed to an external object as its direct cause, is the *primary perception of the oak;* the rest have been the result, not immediately of any thing external, but of preceding *states* of the mind;—that particular mental state, which constituted the perception of the oak, being followed immediately by that different state, which constituted the remembrance of some tree observed before, and this by that different state, which constituted the comparison of the two; and so, successively, through all the different processes of thought enumerated. The mind, indeed, could not, *without the presence of the oak*,—that is to say, without the presence of the light which the oak reflects,—have existed in the state which constituted the perception of the oak. But as little could any *external object*, without this primary mental affection, have produced, *immediately*, any of those *other* states of the mind, which *followed the perception*. There is, thus, *one obvious* distinction of the mental phenomena; as, in relation to their *causes*, *external* or *internal;* and, whatever other terms of subdivision it may be necessary to employ, we have, at least, *one* boundary, and know what it is we mean, when we speak of the *external* and *internal affections* of the mind.

The first stage of our generalization, then, has been the reduction of all the mental phenomena to *two* definite classes, according as the *causes*, or *immediate antecedents*, of our feelings are themselves *mental* or *material*. Our next stage must be the

still further reduction of these, by some new generalizations of the phenomena of each class.

The former of these classes,—that of our *external* affections of the mind,—is, indeed, so *very simple*, as to require but little subdivision. The other class, however,—that of the *internal affections or states of the mind*,—comprehends so large a proportion of the mental phenomena, and these so various, that, without many subdivisions, it would be itself of little aid to us in our arrangement.

The first great subdivision, then, which I would form, of the *internal class*, is into our *intellectual states of mind*, and our *emotions*. The latter of these classes comprehends all, or nearly all the mental states, which have been classed, by others, under the head of active powers. I prefer, however, the term *emotions*, partly, because I wish to avoid the phrase *active powers*,—which, I own, appears to me awkward and ambiguous, as *opposed* to other *powers*, which are not said to be passive; and partly, for reasons before mentioned, because our *intellectual states* or *energies*,—far from being opposed to our active powers,—are, as we have seen, essential elements of their activity,—so essential, that, without them, *these* never could have had the name of *active*; and because I wish to comprehend, under the term, various states of the mind, which cannot, with propriety, *in any case*, be termed *active*,—such as *grief*, *joy*, *astonishment*,—and others which have been commonly, though, I think, inaccurately, ascribed to the intellectual faculties,—such as the feelings of *beauty* and

sublimity,—feelings, which are certainly much more analogous to our other emotions,—to our feelings of *love* or *awe*, for example,—than to our mere *remembrances or reasonings*, or to any *other states of mind, which can strictly be called intellectual*. When I speak, at present, it must be remembered, of the mere *feelings produced* by the *contemplation* of *beautiful or sublime objects*,—not of the *judgment*, which we form, of objects, as more or less *fit* to *excite these feelings*; the judgment being truly *intellectual*, like all our other judgments; but being, at the same time, as distinct from the *feelings* which it *measures*, as *any other judgment* from the external or internal *objects* which it *compares*.

The exact meaning of the term *emotion*, it is difficult to state in any form of words,—for the same reason which makes it difficult, or rather impossible, to explain, what we mean by the term *thought*, or the terms *sweetness* or *bitterness*. What can be more opposite than *pleasure* and *pain!* the real distinction of which is evidently familiar, not to man only, but to every thing that lives; and yet if we were to attempt to show, in what their difference consists, or to give a verbal definition of either, we should find the task to be no easy one. Every person *understands*, what is meant by an *emotion*, at least *as* well, as he understands what is meant by any *intellectual power*; or, if he do not, it can be explained to him, only by *stating* the *number* of feelings to which we *give the name*, or the *circumstances which induce them*. All of them, indeed, agree in *this* respect, that they imply *peculiar vivid-*

ness of feeling, with *this* important circumstance, to distinguish them from the vivid pleasures and pains of sense,—that they *do not arise immediately from the presence of external objects*, but *subsequently* to the primary feelings, which we term *sensations* or *perceptions*. Perhaps, if any definition of them be possible, they may be defined to be *vivid feelings, arising immediately from the consideration of objects, perceived, or remembered, or imagined, or from other prior emotions*. In some cases,—as in that of the emotion which beauty excites,—they may succeed *so rapidly* to the primary perception, as almost to form a part of it. Yet we find no great difficulty of analysis, in separating the *pleasing effect of beauty*, from the *perception of the mere form and colour*, and can very readily imagine the same accurate perception of *these*, *without* the feeling of beauty, as we can imagine the same feeling of beauty to accompany the perception of *forms* and *colours very different*.

" Sure the rising sun,
O'er the cerulean convex of the sea,
With equal brightness, and with equal warmth,
Might roll his fiery orb; nor yet the soul
Thus feel her frame expanded, and her powers
Exulting in the splendour she beholds,
Like a young conqueror moving through the pomp
Of some triumphal day. When join'd at eve,
Soft murmuring streams, and gales of gentlest breath,
Melodious Philomela's wakeful strain
Attemper, could not man's discerning ear,
Through all its tones, the sympathy pursue;
Nor yet this breath divine of nameless joy

Steal through his veins, and fan the awaken'd heart,
Mild as the breeze, yet rapturous as the song." *

Our emotions, then, even in the cases in which they seem most directly to *co-exist* with perception, are still easily distinguishable from it; and, in like manner, when they arise from the *intellectual states* of memory, imagination, comparison, they are equally distinguishable from what we *remember*, or *imagine*, or *compare*. They form truly *a separate order* of the *internal affections of the mind*,—as distinct from the *intellectual phenomena*, as the *class*, to which they *both* belong, is distinguishable from the class of *external affections*, that arise immediately from *the presence of objects without*.

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* Pleasures of Imagination, Book III. v. 464—473.

LECTURE XVII.

CLASSIFICATION OF THE PHENOMENA OF MIND.—CLASS I. EXTERNAL STATES.—INTRODUCTORY.

In my last Lecture, Gentlemen, I endeavoured to prepare the way, for arranging, in certain classes, that almost infinite variety of phenomena, which the mind exhibits,—pointing out to you the peculiar difficulty of such a classification, in the case of phenomena so *indefinite* and *fugitive*, as those of the *mind*, and the nature of that *generalizing principle* of analogy or resemblance, on which every classification, whether of the material or mental phenomena, must alike proceed. I then took a slight view of the *primary*, *leading*, divisions of the phenomena of the mind, which have met with most general adoption,—the very ancient division of them, as of two great departments, belonging to the *understanding* and the *will*,—and the similar division of them, as referable to two classes of powers, termed the *intellectual* and *active powers* of the mind. I explained to you the reasons, which led me to reject both these divisions, as at once *incomplete*, from not comprehending *all* the phenomena, and *inaccurate*, from

confounding even those phenomena, which they may truly be considered as comprehending.

After rejecting these, it became necessary to attempt some new arrangement, especially as we found reason to believe that some advantage could scarcely fail to arise from the *attempt* itself, even though it should fail as to its great object; and we, therefore, proceeded to consider and arrange the phenomena, as nearly as possible, in the same manner as we should have done, if no arrangement of them had ever been made before.

In thus considering them, the first important distinction which occurred to us, related to their *causes*, or immediate antecedents, as *foreign to the mind*, or as *belonging to the mind itself*; a distinction too striking to be neglected as a ground of primary division. Whatever that may be, which feels and thinks, it has been formed to be susceptible of certain changes of state, in consequence of the mere presence of external objects, or at least of changes produced in our mere *bodily organs*, which, themselves, may be considered as external to the mind; and it is susceptible of certain other changes of state, *without any cause external to itself*, *one* state of mind being the immediate result of a *former* state of mind, in consequence of those laws of succession of thoughts and feelings, which He, who created the immortal soul of man, as a faint shadow of His own eternal spirit, has established in the constitution of our mental frame. In conformity with this distinction, we made our *first division* of the phenomena of the mind, into its *external* and *in-*

ternal affections; the word *affection* being used, by me, as the simplest term for expressing a mere *change of state, induced,* in relation to the affecting cause, or the circumstances, whatever they may have been, by which the change was immediately preceded.

The class of *internal affections,*—by far the more copious and various of the two,—we divided into two great orders, our *intellectual* states of mind, and our *emotions,* words which are, perhaps, better understood, before any definition is attempted of them, than after it, but which are sufficiently intelligible *without definition,* and appear to exhaust completely the whole internal affections of the mind. We have sensations or perceptions of the objects that affect our bodily organs; these I term the sensitive or *external affections* of the mind; we remember objects —we imagine them in new situations—we compare their relations; these mere conceptions or notions of objects and their qualities, as elements of our general knowledge, are what I have termed the *intellectual states of the mind;* we are *moved* with certain *lively feelings,* on the *consideration* of what we thus *perceive,* or *remember,* or *imagine,* or *compare,* with feelings, for example, of beauty, or sublimity, or astonishment, or love, or hate, or hope, or fear; these, and various other vivid feelings, analogous to them, are our *emotions.*

There is no portion of our consciousness, which does not appear to me to be included in *one* or *other* of these three divisions. To know all our sensitive states or *affections,*—all our *intellectual* states,—and

all our *emotions*, is to know all the states or phenomena of the mind;

> "Unde animus scire incipiat, quibus inchoet ortus
> Principiis seriem rerum tenuemque catenam
> Mnemosyne: Ratio unde, rudi sub pectore tardum
> Augeat imperium, et primum mortalibus ægris
> *Ira, dolor, metus,* et *curæ* nascantur inanes." *

It must not be conceived, however, that, in dividing the class of *internal affections of the mind*, into the two distinct orders of *intellectual states*, and emotions; and, in speaking of our emotions as subsequent in their origin, I wish to be understood, that these never are *combined*, at the *same moment*, in that sense of combination, as applied to the mind, which I have already explained too frequently, to need again to define and illustrate it. On the contrary, they very frequently concur; but, in all cases in which they do concur, it is easy for us to distinguish them by reflective analysis. The *emotion of pity*, for example, may continue in the mind, while we are *intellectually* planning means of relief, for the sufferers who occasioned it; but, though the pity and the reasoning *co-exist*, we have little difficulty in separating them in our reflection. It is the same with *all* our vivid desires, which not merely *lead* to action, but *accompany* it. The sage, who, in the silence of midnight, continues still those labours which the morning began, watching, with sleepless eye, the fate of some experiment, that almost promises to place within his hand the invisible

* Gray de Principiis Cogitandi, Lib. I. v. 1—5.

thread, which leads into the labyrinths of nature, or exploring those secrets of the *mind* itself, by the aid of which he is afterwards to lay down rules of more accurate philosophizing, and to become *the legislator of all who think*, is not cheered, in his toils, merely by *occasional anticipations* of the truths that await his search. The pleasure of future discovery is, as it were, *a constant light*, that shines upon him and warms him; and, in the very moments in which he *watches*, and *calculates*, and *arranges*, there are *other* principles of his nature, in as lively exercise as his powers of *observation* and *reasoning*. The warrior, at the head of an army, which he has often led from victory to victory, and which he is leading again to new fields of conflict, does not think of glory only in the intervals of meditation or action. The passion which he obeys, is not a mere inspiring genius, that *occasionally descends* to rouse or invigorate. It is the *soul* of his *continued existence*,—it marches with him, from station to station,—it deliberates with him in his tent,—it conquers with him in the field,—it thinks of new successes, in the very moment of vanquishing; and, even at night, when his *body* has yielded at last to the influence of that *fatigue*, of which it was scarcely conscious, while there was room for any new exertion by which fatigue could be increased, and when all the anxieties of military command are slumbering with it, the passion that animates him, more active still, does not quit him as he rests, but is *wakeful* in his very *sleep*, bringing before him *dreams*, that almost renew the tumults and the toils of the day. Our *emo-*

tions, then, may *co-exist* with various sensations, remembrances, reasonings,—in the same manner as *these feelings, sensitive or intellectual*, may variously co-exist with each other. But we do not think it less necessary to class our sensations of *vision* as different from our sensations of *smell*, and our *comparison*, as itself different from the *separate sensations compared*, because we may, at the same moment, both *see* and *smell* a rose, and may endeavour to appreciate the relative amount of pleasure which that beautiful flower thus doubly affords. In like manner, our *intellectual states of mind*, and our *emotions*, are not the less to be considered as *distinct classes*, because any *vivid passion* may continue to exist together with those *intellectual processes of thought*, which it originally prompted, and which, after prompting, it prolongs.

In all these cases, however, in which an emotion *co-exists* with the results of other external or internal influences, it is still easy to distinguish its *subsequence* to the feelings that preceded it. Pity, for example, as in the case to which I have before alluded, may co-exist with a long train of thoughts, that are busily occupied in endeavouring to relieve most effectually the misery which is pitied; but the misery *must have been* itself an object of our thought, *before* the state of mind which constitutes pity, could have been induced. The *emotion* which we feel, on the contemplation of beauty, may continue to coexist with our mere perception of the forms and colours of bodies; but these forms and colours *must* have been perceived by us, *before* the delightful

emotion could have been originally felt. In short, our emotions, though like the *warmth* and *radiance*, which seem to *accompany* the very *presence* of the sun, rather than to *flow from* it—they may seem in many cases to be a part of the very feelings which excite them, are yet, in every instance, as truly *secondary* to these feelings, as the light which beams on us, on the surface of our earth, is subsequent to the rising of the great orb of day.

As yet, we have advanced but a short way, in our generalization of the mental phenomena; though, as far as we *have* advanced, our division seems sufficiently distinct and comprehensive. The mind is susceptible of *certain existing affections*, of *certain intellectual* modifications which arise from these, and of certain *emotions* which arise from both; that is to say, it is capable of *existing in certain states*, the varieties of which correspond with these particular designations. We *see*, we *remember*, or *compare*, what we have seen, *regard* what we see, or remember, or compare, with *desire or with aversion;* and of these, or of states analogous to these, the whole of life, sensitive, intellectual, or moral, is composed. Every minute, therefore, of every hour, in all its variety of occupation, is but a portion of this complicated tissue. Let us suppose ourselves, for example, looking down from an eminence, on the prospect beneath.—On one side all is *desolation*,—and we see perhaps, at a little distance, some half-roofless hovel, as miserable, as the waste immediately around it, which has scarcely the appearance of a *dwelling* for any *living thing*, but seems rather, as if *Nature*

herself had originally placed it there, as a part of the general sterility and ruggedness. On the other side, all is plenty and magnificence;—and we see, amid lawns and wooded banks, a mansion as different in aspect, as if the beings that inhabited it were of a different race,—which, as a part of the *scene*, where it is placed, accords so harmoniously with the *whole*, that, without it, the scene itself would appear *incomplete*, and almost incongruous, as if stripped of some essential charm. To view these separate dwellings, and all the objects around them—if no other feeling arose—would be to have a series of *external or sensitive affections only*. But it is scarcely possible for us to view them, without the instant rise of those *intellectual states of mind* which constitute comparison, and of those affections of another order, which constitute the emotions of *admiration* and *desire* in the one case, and in the other the emotions that are opposite to admiration and desire, together perhaps with some of those bitter emotions which the sight of misery makes in every breast that is not unworthy of so sacred an influence.

In *this* example, our *intellectual states of mind*, and our *emotions*, have for their *objects things really existing without;* but the *external affections of our senses*, though the most *permanent*, and usually the most *vivid*, and therefore the *best remembered*, of all the *sources of our internal feelings*, are *far* from being *necessary*, in every instance, to the production of these. There is a constant, or almost constant, *succession of internal affections of mind*, of thoughts and emotions, following thoughts and

emotions, which even though we were to be rendered incapable of a single new sensation,—if our *animal life* could in these circumstances be long protracted,—would still preserve to us also that *intellectual* and *moral* existence, which is the only life, that is worthy of the name. The *knowledge* which we acquire from *without*, lives in us *within*; and, in such a case as that which I have now imagined, our memory would be to us in some measure every sense which we had lost, creating to us again that very world which had vanished before us. If we could *compare* and *love* or *hate* only *things actually present*, we should be far from the maturity and perfection of an *infant's* mind, and should scarcely be advanced to the rank of idiocy, which, limited as it is in its range, still comprehends, in its little sphere of foresight and memory, some few *moments* at least of the *past*, and even a moment or two of the *future*. It is with the *future* and with the *past*, that, *intellectually* and *morally*, we are chiefly conversant. To these high capacities of our being, the subjects, which can exercise our powers and feelings, however distant in time or place, are as it were *everlastingly present*,—like that mysterious eternal *now*, of which theologians speak,—in which *past*, *present*, and *future* are considered, as, in every moment of every age, alike visible to the omniscient glance of the Divinity. We *love* the *virtues*, of which we read, with the same sort of emotion, with which we love the virtues that are mingling with us in the present hour. The patriot of the most remote age,—of whom we know nothing, but the historical tale, of

his voluntary perils or sufferings, in some generous cause,—is like the *friend of our familiar intercourse;* and the sacrifices, that wrought the happiness of millions of beings, who are now not merely *unknown* to us, but of whom *not a single name is remembered on the earth,* awake a sort of veneration, that is almost combined with *gratitude,* as if we were in the presence of a personal deliverer. It is the same with *absolute unreality,* nor merely with that which *no longer* exists, but with *that which never had existence.* We are struck with the *beauty* of what we only *imagine,* in the same manner, though perhaps not with the same liveliness of feeling, as we are struck with the beauty of external things. Our emotions then, however dependent they may have been originally, are *now* no longer dependent, on these external things. They may arise, from *memory* or *imagination,* as readily as from perception; but when they arise from memory or imagination, they are as truly *distinguishable* from *what we remember and imagine,* as they are distinguishable from our *perceptions* of mere forms and colours and other sensible qualities, when they arise from what we *perceive.*

To have arranged all the varieties of feelings of which the mind is susceptible, in the three great divisions to which our arrangement as yet has extended,—though it is unquestionably to have made *some* advance in our generalization,—is yet to have made only a *small part* of the necessary progress; since each of these three orders comprehends almost innumerable phenomena, which require the aid of

more minute division. In the class of our *external* affections, indeed, this subdivision is very simple and easy; since our separate *organs of sense* furnish, of themselves, a very evident ground of distinction. But the *two orders* of our *internal affections* have no such obvious and tangible distinction, to serve as the basis of their subdivisions. They admit, however,—as I trust we shall find,—of distinctions, which, though not equally *obvious*, are almost equally *definite*, and require only a very little reflection, to be understood as clearly, as the organic relations, according to which we distinguish our sensations of sound, or smell, or sight. It is not my intention, however, to proceed, at present, to the consideration of these subdivisions; since the nature of the more minute arrangement will, I conceive, be *better* understood, when we come to treat of each *separate order fully*, than they *could* be *now*, by the mere enumeration of a few names, of the propriety of which, as mere names, and, still more, of the propriety of the arrangement which they involve, you could not be expected to form any accurate judgment, without a fuller elucidation.

All which I must request you, then, at present to keep in remembrance, is the *primary* division, which we have made, of the different states of the mind into two great classes, and the *secondary* division which we have made of *one* of these classes, into its two very comprehensive orders.—You will remember, then, that the various affections, of which the mind is susceptible, are either *external*, as they arise

from causes *without the mind*, or *internal*, as they arise from *previous states*, of the *mind itself*;—that, of these *internal affections*, some are mere *conceptions* or *notions* of former feelings, or of objects and of the qualities or relations of objects, as remembered or variously combined or compared,—results of different susceptibilities of our intellectual constitution, to which different names have been given, *conception*, *memory*, *imagination*, *abstraction*, *reason*, and other synonimous terms;—that *these* internal affections or states of the mind, which I have denominated its *intellectual states*, are distinctly separable, in our reflective analysis, from certain vivid feelings, that may arise instantly in the mind, on the consideration of these mere *intellectual* results, or on the perception of objects without,—feelings of *admiration*, *love*, *desire*, and various other *analogous*, or *opposite* states of the mind;—but that there *is* such an order of vivid feelings, which arise, in many cases, on the mere consideration of what we perceive, or remember, or imagine, or compare, and that this order is what I wish to be distinguished by the name of *emotions*.

According to this division, therefore, of the mental phenomena, into those which are of *external* and those which are of *internal* origin, and the subdivision which we have made of this latter class, I shall proceed to consider, *first*, The external powers or susceptibilities of the mind; *2dly*, The intellectual powers or susceptibilities of the mind; and, *3dly*, Its susceptibilities of emotion,—beginning with that class, which we have every reason to sup-

pose to be *first*, in the actual order of developement, —the powers or susceptibilities of the mind, in its immediate relation to its own bodily organs.

Certain states of our bodily organs are directly followed by certain states or affections of our mind; —certain states or affections of our mind are directly followed by certain states of our bodily organs. The nerve of sight, for example, is affected in a certain manner; *vision*, which is an affection or state of the mind, is its consequence. I will to move my hand; the hand obeys my will, so rapidly, that the motion, though truly subsequent, seems almost to *accompany* my volition, rather than to follow it. In conformity with the definitions before given of power and susceptibility, the one as implying a reference to something consequent, the other a reference to something *antecedent*, I should be inclined to consider the *sensation* which follows the presence of an external object as indicating a mental *susceptibility* of being so affected;—the production of muscular motion by the will, as indicating a mental *power*. But the terms are of less consequence, if you understand fully the distinction that is implied in them; and you may be allowed still, in compliance with the general language, to speak of the *power* or *faculty* of *sensation* or *perception*, if you mean nothing more, as often as you use these terms, than that *the mind is affected in a certain manner*, and, therefore, must have had a previous *susceptibility* of being thus affected whenever *certain changes have previously taken place*, in that nervous system, with which it is connected.

In considering the susceptibilities of the mind, I comprehend, under its *external affections*, all those phenomena or states of the mind, which are commonly termed *sensations*; together with all our internal organic feelings of pleasure or pain, that arise from states of the nervous system, as much as our other sensations. Many of these are commonly ranked under another head, that of *appetites*,—such as *hunger, thirst*, the *desire* of *repose*, or of *change of muscular position*, which arises from long-continued exertion; the oppressive anxiety, which arises from impeded respiration, and various other diseases, arising from bodily uneasiness. But these *appetites* evidently admit of being analysed into *two distinct elements*,—a *pain* of a peculiar species, and a subsequent *desire of that which is to relieve the pain*,—states of mind, of which one may immediately succeed the other; but which are, unquestionably, as different in themselves, as if no such succession took place,—as different as the pleasure of music is from the mere desire of enjoying it again, or as the pain of excessive heat, in burning, from the subsequent desire of coolness. The pain, which is *one* element of the appetite, is an *external* affection of the mind, to be classed with our other sensations,—the succeeding desire, which is another element of it, is an *internal* affection of the mind, to be classed with our other emotions of desire. We *might* have felt the same pain of hunger, though we had not been aware, that it arose from want of food, and consequently could not have felt any desire of food, but merely the general desire of relief which attends every disagreeable sensation. We might have felt

the same uneasiness, which we term *thirst*, though we had not been aware, that it would be relieved by a draught of any beverage,—and the same pain of *impeded respiration* or *fatigue*, though nature had not led us instinctively, in the one case, to perform the muscular actions necessary for expiration and inspiration; in the other, to change our posture, and thus give repose to the wearied limbs. Whatever be the *organic states*, which occasion these painful feelings, that are elementary in our appetites, there can be no doubt, that *some* organic affections precede them, as truly as *some* affection of an external organ precedes the pain of a burn, or the painful temporary blindness, when we are dazzled with excessive light. And though, in the case of the appetite, we may give the same name to the pain, and to the desire of that which is to relieve the pain; or rather, may give one name to the combination of the two feelings,—which is not to be wondered at, where the two feelings are so *universally* and so *immediately successive*,—this error, or rather this mere abbreviation of language, is no reason that we should consider the *elementary pain* itself, as different, in kind, from our other pains, that have not merely *half a term* to express them, but a *whole undivided* word of their own. The pain, of which the appetite desires the relief, is *a sensation*, as much as any other internal bodily pain which we feel,—*a state or affection of the mind, arising, immediately and solely, from a state or affection of the body*,—which is the only definition that can be given of a *sensation*.

The *pain of hunger* and *thirst*, then, and, in general, *every internal pain arising from a state of the bodily organs*,—and distinct from the subsequent desires which they occasion,—are as truly *sensations*, as any other sensations; and the desires that follow these particular sensations, are as truly *desires*, as any other desires of which we have the consciousness. We may, indeed, if we resolve to invent a new name, for those particular desires, that terminate *immediately* in the *relief of bodily pain*, or *the production of bodily pleasure*, give to such desires the name of *appetites*; but it is surely a very simple analysis only, that is necessary to separate, from the *desire of relief*, the *feeling of the pain* which we wish to be relieved; since it is very evident, that the pain *must* have existed primarily *before* any such desire could be felt.

That the various species of *uneasiness*, which are elementary parts of our *appetites*, recur, at intervals, in which there is some degree of *regularity*, does not alter their nature, when they *do* recur, so as to render a peculiar arrangement necessary for including them. The mental states, which constitute the uneasiness that is felt, recur thus at *intervals*, not from any thing peculiar in the *mind itself*, the phenomena of which alone we are considering, but because the *body* is *only at intervals* in the *state*, which precedes or induces those peculiar mental affections. If, instead of the *two* or *three* periods, at which the appetite of hunger recurs, the nervous system were, one hundred times in the day, at intervals the most irregular, in that state, which is immediately followed

by the feeling of hunger, the *painful feeling*,—and the consequent *desire* of *food*, which has been found to relieve it,—would, of course, be felt *one hundred times in the day*. The regularity, therefore, of the recurrence of this *state of the nerves*, is a phenomenon, which belongs to the consideration of the *physiologist of the body*, not of the *physiologist of the mind*, whose immediate office is finished, when he can trace any particular feeling of the mind to some affection of our organic frame, as its invariable antecedent; and who knowing, therefore, that the feeling of pain in any of our appetites, is the effect or result of some organic affection, is not surprised that it should not recur, when that organic affection has not previously taken place,—any more than he is surprised that we do not enjoy the fragrance of roses or violets, when there are no particles of odour to be inhaled by us; or do not listen to songs and choral harmonies, when there is no vibration to be transmitted to the auditory nerve. It is at certain regular periods, that the *full light of day*, and the *twilight* of morning and evening, are perceived by us. But we do not think it necessary, on this account, to give any peculiar name to these visual perceptions, to distinguish them from *others less* regular, because we know, that the reason of the *periodic* recurrence of these perceptions, is that the *various degrees of sunshine*, which produce them, exist *only at such intervals*. We are *hungry*, when the nerves of the stomach *are in a certain state*; we *perceive the sun*, when the organ of vision *is in a certain state*. It is as little wonderful, that we should *not*

have the feeling of hunger, except when the nerves of the stomach are in this state, as that we should *not* have the perception of the meridian sun, when the sun itself is beneath our horizon.

Since the mere pains of appetite, however, most important as they truly are, for the ends which they immediately answer, are yet of little importance in relation to our general knowledge, it is unnecessary to dwell on them at length. But I cannot quit the consideration of them, without remarking that admirable provision which the gracious Author of Nature has made by them, for the preservation not of our *being* merely, but of our *well-being*—of that *health* and *vigour*, without which, a frail and feverish existence, at least in its relation to this earthly scene, would be of little value. The *daily waste* of the body requires *daily supply* to compensate it; and if this supply be *neglected*, or be *inadequate*—or, on the other hand, if it be inordinately great, *disease* is the necessary *consequence*. To preserve the *medium*, therefore, or at least to prevent any *very* great deviation from it, *He*, who planned our *feelings* and *faculties* as well as our *bodily frame*, has made it painful for us to *omit* what is so important to life; and painful also to *prolong the supply* in any great proportion, *after* the demands of nature have been adequately satisfied. If food had afforded gratification only as relieving the pain of hunger, these natural boundaries of appetite would have required no aid from *moral* or *physical* lessons of temperance. But the indulgence of nature, in conferring on us the sense of taste, and making food a *luxury*

as well as a *relief*, we abuse, as we abuse her other kindnesses. The pleasures of this most intemperate of senses, may lead, in some degree, beyond the due point of supply, the greater number of mankind; and may drive, to excesses more injurious, all those herds of unthinking *sensualists* who prefer the sickly enjoyment of an hour, to the *health* and *virtue*, and *intellectual* as well as *physical* comfort, of more frugal repasts. Yet even to them, nature points out in the feeling of *satiety*, where intemperance begins, or where it has *already begun*; and if they persist, *notwithstanding this feeling*, how much more would they be in danger of over-loading the powers of life, if there had been no such feeling of growing uneasiness, to suppress the avidity of insatiable indulgence.

"Though a man knew," says Doctor Reid, "that his life must be supported by *eating*, reason could not direct him *when* to eat, or *what*; *how much*, or *how often*. In all these things, appetite is a much better guide than reason. Were *reason only* to direct us in this matter, its calm voice would often be drowned in the hurry of business, or the charms of amusement. But the voice of appetite *rises gradually*, and, at last, becomes *loud* enough to call off our attention from any other employment."*

If indeed, the necessary supply were long neglected, the morbid state of the body which would ensue, though no pain of actual hunger were to be felt, would convince, at last, the sufferer of his folly. But the providence of our gracious Creator, has not

* On the Active Powers, Essay III. c. 1,

trusted the existence of man to the dangerous admonition of so *rough* a monitor, which might, perhaps, bring his folly before him only when it was *too late to be wise.* The *pain of hunger*—that *short disease*, if it may be so termed, which it is in our power so speedily to cure, *prevents diseases* that more truly deserve the name. Between *satiety* on one side, and *want* on the other, the stream of health flows tranquilly along, which, but for these boundaries, would speedily waste itself and disappear; as the most magnificent river, which, if dispersed over a boundless plain, would flow almost into nothing, owes its *abundance* and *majestic beauty* to the very *banks* that seem to confine its waters within too narrow a channel.

Beside those particular feelings of bodily uneasiness, which, as attended with desire, constitute our *appetites*, there are *other* affections of the *same class*, which, though not usually ranked with our external sensations or perceptions, because we find it difficult to ascribe them to any local organ, are unquestionably to be arranged under the same head; since they are feelings which arise, as immediately and directly from a certain state of a part of the nervous system, as any of the feelings which we more commonly ascribe to *external sense.* Of this kind is that muscular pleasure of *alacrity* and *action*, which forms so great a part of the delight of the *young* of every species of living beings, and which is felt, though in a less degree, at every period of life, even the most advanced; or which, when it *ceases* in *age*, only gives place to another species of

muscular pleasure—that which constitutes *the pleasure of ease*—the same species of feeling, which doubles, to every one, the delight of exercise, by sweetening the repose to which it leads, and thus making it *indirectly*, as well as *directly*, a source of enjoyment.

In treating of what have been termed the *acquired perceptions of vision*, which are truly what give to vision its range of power, and without which the mere perception of colour would be of little more value than any other of the simplest of our sensations, I shall have an opportunity of pointing out to you some most important purposes, to which our muscular feelings are instrumental; and in the nicer analysis which I am inclined to make of the perceptions commonly ascribed to touch,—if my *analysis be accurate*—we shall find them operating at least as powerfully. *At present*, however, *I* speak of them merely as sources of animal pleasure or pain, of *pleasure* during moderate exercise and repose, and of *pain* during morbid lassitude, or the fatigue of oppression and unremitted labour.

The pleasure which attends good health, and which is certainly more than mere freedom from pain, is a pleasure of the same kind. It is a pleasure, however, which, like every other long continued bodily pleasure, we may suppose, to be diminished by habitual enjoyment; and it is, therefore, chiefly, on recovery from sickness, when the habit has been long broken by feelings of an opposite kind, that we recognize *what it must originally have been*; if, indeed, it be

in our power to separate, completely, the mere animal pleasure from those mingling reflecting pleasures which arise from the consideration of past pain, and the expectation of future delight. To those among you, who know what it is to have risen from the long captivity of a bed of sickness, I need not say, that every function is, in this case, more than mere vigour; it is a happiness but to *breathe* and to *move;* and not every *limb* merely, but almost every fibre of every limb, has its separate sense of enjoyment. "What a blessed thing it is to breathe the fresh air!" said Count Struensee, on quitting his dungeon, though he was quitting it only to be led to the place of execution, and cannot, therefore, be supposed to have felt much more than the mere animal delight.

> "He does not scorn it, who, imprisoned long
> In some unwholesome dungeon, and a prey
> To sallow sickness, which the vapours, dank
> And clammy of his dark abode have bred,
> Escapes at last to liberty and light;
> His cheek recovers soon its healthful hue;
> His eye relumines its extinguish'd fires;
> He walks, he leaps, he runs—is wing'd with joy,
> And riots in the sweets of every breeze."*

On these mere animal gratifications, however, I need not dwell any longer. There is much more to interest our curiosity, in the *sensations* and *perceptions* which more frequently go under those names; to the consideration of which I shall proceed in my next Lecture.

* Cowper's Task, book i.

LECTURE XVIII.

ON THE MORE DEFINITE EXTERNAL AFFECTIONS OF MIND, IN GENERAL.

In my Lecture yesterday, after some further elucidation of the *triple division* which we formed of the mental phenomena, as *external or sensitive affections of the mind, intellectual states of the mind,—emotions,*—I proceeded to consider the *first of these divisions,* of which the characteristic distinction is, that *the phenomena included in it have* their causes or *immediate* antecedents *external to the mind itself.* In this division, I comprehended, together with the feelings which are universally ascribed to certain organs of sense, many feelings, which, though unquestionably originating in states of our bodily organs, as much as our other sensations, are yet commonly ranked as a different order—such as our various appetites, or rather that elementary uneasiness which is only a part, but still an essential part of our appetites, and which is easily distinguishable from the mere desire, which is the other element; since, however rapid the succession of them may be,

we are yet conscious of them as *successive*. The particular uneasiness, it is evident, *must* have been felt as a *sensation before* the *desire* of that which is to relieve the uneasiness could have arisen. To the same class, too, I referred the various organic feelings, which constitute the animal pleasure of good health, when every corporeal function is exercised in just degree; and in a particular manner, our *muscular* feelings, whether of mere general lassitude or alacrity; or those fainter differences of feelings which arise in our various motions and attitudes, from the different muscles that are exercised, or from the greater or less contraction of the same muscles. These *muscular feelings*, though they may be almost unnoticed by us, during the influence of stronger sensations, are yet sufficiently powerful, when we attend to them, to render us, *independently of sight and touch*, in a great measure sensible of the *position* of our *body in general*, and of its *various parts*; and, *comparatively indistinct* as they are, they become,—in many cases, as in the acquired perceptions of vision, for example, and equally too, as I conceive, in various *other* instances, in which little attention has been paid to them by philosophers,—*elements* of some of the nicest and most accurate judgments which we form.

It is, however, to that widest and most important order of our external affections, which comprehends the feelings *more commonly* termed *sensations*, and universally ascribed *to particular organs of sense*, that we have now to proceed. In these, we find the *rude elements* of *all our knowledge*, the *materials*

on which the mind is ever operating, and without which, it seems to us almost impossible to conceive that it *could ever have operated at all,* or could, even in its absolute inactivity, have been conscious of its own *inert existence.*

This order of our external feelings comprehends all those *states* of mind, however *various* they may be, *which immediately succeed the changes of state, produced, in any of our organs of sense, by the presence of certain external bodies.* The mental affections are themselves,—as I have said,—commonly termed *sensations;* but we have no *verb,* in our language, which exactly denotes what is expressed in the substantive noun. To *feel* is, in its two senses, either much more limited or much more general, being confined, *in its restricted meaning,* to the sensations of one organ, that of touch,—and as a more general word, being applicable to all the *varieties of our consciousness,* as much as to *those particular varieties,* which are *immediately successive to the affections of our organs of sense.* We are said, in this wider use of the term, to feel indignation. love, surprise, as readily as we are said to feel the warmth of a fire, or the coldness of snow.

In defining our *sensations,* to be those mental affections, *which are immediately successive to certain organic affections,* produced *by the action of external things,* it is very evident, that I have made two assumptions,—first of the existence of external things, that *affect our organs of sense;* and, secondly of *organs of sense,* that are *affected* by external things;—unless, indeed, the assumption of the ex-

istence of organs of sense be considered,—as in philosophic truth it unquestionably *is*—only another form of the assumption of the *existence of external things*, since, in relation to *the sentient mind*, the *organs* thus *supposed* to exist, are, in strictness of language, *external*, as much as the *objects supposed to act upon them*. All of which we are truly *conscious*, in sensation, is *the mental affection*, the last link of the series, in the supposed process; what we term our *perceptions* of *organs of sense*, or of *other external things* that act upon these—our ideas, for example, of a brain or an eye, a house or a mountain, being as truly *states of our own percipient mind*, and nothing *but* states of our own mind, as our feeling of *joy* or *sorrow*, *hope* or *fear*, *love* or *hate*,—to which we never think of giving an *existence*, nor a direct and immediate *cause* of existence, *out* of ourselves. By the very constitution of our nature, however, or by the influence of associations as irresistible as intuition itself,—it is impossible for us *not* to feel this essential reality in the causes of *one* set of our mental affections, in the same manner as it is impossible for us *to* ascribe it to another set. The brain, the eye, the house, the mountain, we believe, *and cannot but believe*, to have external existence, independent of our own; the *joy* and *sorrow*, *hope* and *fear*, *love* and *hate*, we believe, *and cannot but believe*, to be merely states of our own mind, occasioned by other former states of mind, and dependent, therefore, for their continuance, on *our own* continued existence only. Even in our wildest dreams, —in which we imagine all things that are possible,

and almost all things which are impossible; we never consider our *joy* or *sorrow*, as directly indicative of any thing separate from ourselves, and independent of us.

> "While o'er our limbs sleep's soft dominion spread,
> What tho' our soul fantastic measures trod,
> O'er fairy fields; or mourn'd along the gloom
> Of pathless woods; or down the craggy steep
> Hurl'd headlong, swam with pain the mantled pool;
> Or scaled the cliff,—or danced on hollow winds,
> With antic shapes, wild natives of the brain;"

it was still only the *cliff*, the *wood*, the *pool*, which we considered as *external:* the *sorrow* with which we mourned along our gloomy track, the *pain* with which we swam the turbid water, the *horror* which we felt at the antic shapes, with which we mingled in the ghostly dance, *were* felt to be wholly *in ourselves*, and constituted, while they lasted, the very feeling of our own existence.—The *belief of an external world* is, however, to come afterwards under our full examination:—It is sufficient, for the present, to know, that in the period after infancy, to which alone our memory extends, we are led, *irresistibly*, to *believe* in it; and that the belief of it, therefore, in whatever manner it may have originated in the imperfect perceptions of our infancy, is now, when those perceptions are mature, so completely beyond the power of argument to overcome, that it exists, *as strongly*, in those who reason *against* it, as in those who reason *for* it;—that the reference to a direct external cause, however, does not accom-

pany *every* feeling of our mind, but is confined to a *certain number* of that *long* succession of feelings, which form the varied consciousness of our life,—and that the feelings, with respect to which this reference is made, are the class of sensations, which, when combined with this reference, have commonly been distinguished by the name of perceptions. That we have *no perfect evidence* of the external existence thus ascribed by us,—independently of *our own irresistible belief* of it, may be allowed to the sceptic;—and the reasoning of Doctor Reid on the subject, as far as he proceeds *beyond* the assertion of this irresistible belief, and attempts, what has been commonly regarded as a confutation of the scepticism on this point,—by representing it as proceeding on a mistake, with respect to the nature of our ideas,—is *itself*, as we shall afterwards find, *nugatory* and fallacious. But still, notwithstanding the errors of philosophers with respect to it, the belief itself is, in the circumstances in which we now exist, so truly a part of our constitution, that to *contend against it in argument* would be to *admit its validity*, since it would be to suppose the existence of some one whom we are fairly undertaking to *instruct* or to *confute*.

In what circumstance the intuitive belief,—*if*, as I have said, the belief be in any case intuitive,—arises; or rather, in how large a proportion of cases, in which the reference seems primary and immediate, it is, more probably, the effect of secondary associations transferred from sense to sense, will appear

better after the minute analysis on which we are to enter, of the different tribes of our sensations.

In referring to the *particular class of sensations*, and consequently to an *external cause*, a *certain number* only of the affections of our mind, there can be no doubt, that we proceed *now*, in the mature state of our knowledge, with more accuracy, than we could have attained, in that early period of life, when our original feelings were more recent. We have now a *clearer* and *more definite* belief of an *external world*, and of *objects of sensation* separate from our *sensations themselves*; without which general belief, *previously obtained*, we should as little have ascribed to *an external organic cause* many of our feelings, which we now ascribe to one—our sensations of *sound* and *fragrance*, for example,—as we now ascribe to such an immediate external cause, our *emotions* of *joy* or *sorrow*. A *still more important* acquisition, is our knowledge of our *own organic frame*, by which we are enabled, in a great measure, to *verify* our sensations,—to *produce* them, as it were at pleasure, when their external objects are before us, and in this way to *correct* the feelings, which have *risen spontaneously*, by those, which we ourselves *produce*. Thus, when, *in reverie*, our conceptions become peculiarly vivid, and the objects of our thought seem almost *to exist in our presence*; if only *we stretch out our hand*, or fix our eyes on the forms that are permanently before us, the illusion vanishes. Our *organ of touch* or of sight, is not affected in the same manner, as if the object that charms us in our musing dream, were really

present; and we class the feeling, therefore, as a *conception*,—not as a *sensation*,—which, but for the opportunity of this correction, we should unquestionably, in many instances, have done.

But though, in forming the class of our sensations, we derive many advantages from that *full* knowledge, which the experience of many years has given, we *purchase* these by *disadvantages* which are perhaps as *great*, and which are greater, from the very circumstance, *that it is absolutely out of our power to estimate their amount.* What we consider as the *immediate* sensation, is *not* the *simple mental* state, as it *originally* followed that corporeal change, which now precedes it; but, at least in the most striking of all the tribes of our sensations, is a very different one. We have the authority of reason, *a priori*, as shewing no peculiar connexion of the points of the retina with one place of bodies more than with another; and we have the authority also of observation, in the celebrated case of the young man who was couched by Cheselden, and in other cases of the same peculiar species of blindness, in which the eyes, by a surgical operation, have been rendered *for the first time capable of distinct vision*, that if we had had no organ of sense *but that of sight*, and no instinctive judgment had been superadded to mere vision, we should not have had the power of distinguishing the magnitude and distant place of objects;—a mere *expanse of colour* being all which we should have perceived, if even colour itself could, in these circumstances, have been perceived by us as expanded. Yet it is

sufficient *now*, that rays of light, precisely the same in *number*, and in precisely the same *direction*, as those which, at one period of our life, exhibited to us colour, and *colour alone*, should fall once more on the *same small expanse of nerve*, to give us instantly that *boundlessness of vision*, which, almost as if the fetters of our mortal frame were shaken off, lifts us from our dungeon, and makes us truly citizens, not of the *earth* only, but of the *universe*. Simple as the principle may now seem, which distinguishes our *secondary* or *acquired* perceptions of vision from those which were *primary* and *immediate*, it was long before the distinction was made; and till a period which—if we consider it in relation to those long ages of philosophic inquiry, or, rather, most *unphilosophic argumentation*, which had gone before—may be considered almost as *in our own time*, longitudinal distance was conceived to be as completely an *original* object of sight as the varieties of mere *colour* and *brilliancy*. There *may*, therefore,—though we have *not yet* been able, and may *never* be able, to discover it,—be a corresponding difference in our *other* sensations, which now seem to us *simple and immediate*. In the case of sound, indeed, there is a very evident analogy to these visual acquired perceptions; since a constant reference to *place* mingles with our sensations of this class, in the same manner, though not so distinctly, as in our perceptions of sight. We perceive the sound, as it were, *near* or at a *distance*, in *one* direction rather than in *another*; as, in the case of longitudinal distance in vision, we perceive *colour* at one distance

rather than at another. Yet there is as little reason, from the nature of the organic changes themselves, to suppose, that different affections of our auditory nerves should *originally* give us different notions of distance, as that such notions should originally be produced by different affections of the retina; and, as in sight and hearing, so it is far from improbable, that, in *all* our senses, there *may*, by the reciprocal influence of these upon each other, or by the repeated lessons of individual experience in each, be a similar modification of the original *simple* feelings, which, in that first stage of existence that opened to us the world and its phenomena, each *individual* organ separately afforded. Our reasoning with respect to them, therefore, *as original organs of sense*, may, perhaps, be as false, as our chemical reasoning would be, were we to attempt to infer the properties of an *uncombined acid*, or alkali, from our observation of the very different properties of a neutral salt, into the composition of which we know that the acid or the alkali has entered.

If, indeed, it were in our power to be introduced to a society, like that of which Diderot speaks, in his Letter on the Deaf and Dumb, and to hold communication with them, all our doubts on this subject would be removed. "What a strange society," says he, "would five persons make, each of them endowed with one only of our five different senses; and no two of the party with the same sense! There can be no doubt, that, differing, as they *must* differ, in all their views of nature, they would treat each other as madmen, and that each would look up-

on the others with all due contempt. It is, indeed, only an image of what is happening every moment in the world; we have but one sense, and we judge of every thing."*—"There is, however," he justly remarks, "*one* science, though *but one* science, in which the whole society of the different senses might agree,—the science which has relation to the *properties of number*. They might each arrive, by their separate abstractions, at the sublimest speculations of arithmetic and algebra; they might fathom the depths of analysis, and propose and resolve problems of the most complicated equations, as if they were all so many Diophantuses. It is perhaps," he adds, "what the oyster is doing in its shell."†

From such a society,—if, indeed, we could hold any communication with these profound algebraists, except in their common science of numbers,—we might undoubtedly learn, what are the direct immediate affections of mind, to which our senses individually give rise, and consequently, how much, while feeling has blended with feeling, they have reciprocally operated on each other. But, in our present circumstances, unaided by intercourse with such *living abstractions*, it is impossible for us to remove wholly this uncertainty, as to the *kind* and *degree* of influence, which experience may have had, in modifying our primary sensations. We may wish, indeed, to be able to distinguish our *present* feelings, from those which the same objects *originally* excited; but, since no memory can go back to the pe-

* Œuvres, tom. ii. p. 12. † P. 131.

riod, at which we did not perceive longitudinal distance, as it were, *immediately* by the eye, as little, we may suppose, can any memory go back to the period, when other sensations, less interesting than those of vision, were first excited. Could we trace the series of feelings, in a single mind,—as variously modified, in the progress from infancy to maturity,—we should know more of the intellectual and moral nature of man, than is probably ever to be revealed to his inquiry,—when, in ages, as remote from that in which we live, and perhaps as much more enlightened, as our own age may be said to be, in relation to the period of original darkness and barbarism, he is still to be searching into his own nature, *with the same avidity as now.* He must, indeed, be a very dull observer, who has not felt, on looking at an infant, some desire to know the little processes of *thought*, that are going on in his curious and active mind; and who, on reflecting on the value, as an attainment in science, which the sagest philosopher would set on the consciousness of those acquisitions which infancy has already made, is not struck with that nearness, in which, in some points, extreme knowledge and extreme ignorance may almost be said to meet. What metaphysician is there, however subtile and profound in his analytical inquiries, and however successful in the analyses which he has made, who would not give all his past discovery, and all his hopes of future discovery, for the certainty of knowing with exactness what every infant feels? The full instruction, which such a view of our progressive feelings, from their very origin, in the first

sensations of life, would afford, Nature, in her wisdom, however, has not communicated to us,—more than she has communicated to us the nature of that state of being, which awaits the soul, after it has finished its career of mortality. Our existence seems, in our conception of it, never to have had a beginning. As far back as we can remember any event, there is always a period, that appears to us *still farther back*, the events of which we cannot distinguish; as, when we look toward the distant horizon, we see, less and less distinctly, in the long line which the sunshine of evening still illuminates, plains, and woods, and streams, and hills, more distant, half melting into air, beyond which our eye can find nothing,—though we are still certain, that other woods, and streams, and plains, are there, and that it is only the imperfection of our sight, which seems to bound them as in another world. It is to man, when he thinks upon his own beginning, as if he felt himself in a world of enchantment, amid the shades and flowers of which he had been wandering, unconscious of the time at which he entered it, or of the objects that are awaiting him, when he shall have arrived at the close of that path, whose windings still lead him forward,—and knowing little more, than that he is himself happy, and that the unknown Being, who has raised this magnificent scene around him, must be the Friend of the mortal, whom he has deigned to admit into it.

" Well pleased he scans
The goodly prospect,—and, with inward smiles,
Treads the gay verdure of the painted plain,—

Beholds the azure canopy of heaven,
And living lamps, that over-arch his head,
With more than regal splendour,—bends his ear
To the full choir of water, air, and earth;
Nor heeds the pleasing error of his thought,
Nor doubts the painted green or azure arch,
Nor questions more the music's mingling sounds,
Than space, or motion, or eternal time;
So sweet he feels their influence to attract
His fixed soul, to brighten the dull glooms
Of care, and make the destined road of life
Delightful to his feet. So, fables tell,
The adventurous hero, bound on hard exploit,
Beholds with glad surprise, by secret spell
Of some kind sage, the patron of his toils,
A visionary paradise disclosed,
Amid the dubious wild:—With streams, and shades,
And airy songs, the enchanted landscape smiles,
Cheers his long labours, and renews his frame." *

The philosophic use of the term *sensation* does not necessarily imply, what, in its popular use, is considered almost as involved in it; and perhaps, therefore, it may not be superfluous to *warn* you, that it is not confined to feelings, which are *pleasurable* or *painful*, but extends to *every* mental affection, that is *the immediate consequence of impression on our organs of sense*,—of which *mental states or affections, many*, and, as I am inclined to think, *by far the greater number*, are of a kind, that cannot be termed either agreeable or disagreeable. Of the objects of sight, for example, which are of such very frequent occurrence, how *few* are there, at which

* Pleasures of Imagination, Book III. v. 493—514. *The* fixed soul, v. 505. Exploits, v. 508; and Spells, v. 509. *Orig.*

we look, either with pleasure or with pain,—if we except that *indirect* pleasure, which, in particular cases, they may afford, as communicating to us information, that is *valuable in itself*, or as gratifying even our *idlest curiosity*. To take one of the most striking cases of this sort,—though we may derive, from the perusal of a work that interests us, the purest delight, it is a delight, resulting only from the conceptions, which the author, in consequence of the happy contrivance of symbolic characters, has been able to *transfuse*, as it were, from his own mind into ours; but, during all the time of the perusal, sensations, *almost innumerable*, have been excited in us, by the separate characters, with which the pages are covered, that have never mingled even the faintest direct pleasure, with the general emotion, which they, and they alone, have indirectly produced.

"I apprehend," says Dr Reid, "that, besides the sensations, that are either agreeable or disagreeable, there is still a greater number that are indifferent. To these we give so little attention, that they have no name, and are immediately forgot, as if they had never been; and it requires attention to the operations of our minds, to be convinced of their existence. For this end, we may observe, that, to a good ear, every human voice is distinguishable from all others. Some voices are pleasant, some disagreeable; but the far greater part can neither be said to be one or the other. The same thing may be said of other sounds, and no less of tastes, smells, and colours; and if we consider, that our senses are in continual exercise while we are awake, that some

sensation attends every object they present to us, and that familiar objects seldom raise any emotion, pleasant or painful,—we shall see reason, besides the agreeable and disagreeable, to admit a third class of sensations, that may be called indifferent. The sensations that are indifferent, are far from being useless. They serve as signs, to distinguish things that differ; and the information we have concerning things external, comes by their means. Thus, if a man had no ear, to receive pleasure from the harmony or melody of sounds, he would still find the sense of hearing of great utility; though sounds gave him neither pleasure nor pain, of themselves, they would give him much useful information; and the like may be said of the sensations we have by all the other senses."*

It is as *signs*, indeed, far more than as mere pleasures in themselves, that our sensations are to us of such inestimable value. Even in the case to which I before alluded, of the symbolic or arbitrary characters of a language, when we consider all the important purposes to which these are subservient, as raising us originally from absolute barbarism, and saving us from relapsing into it, there might be an appearance of paradox, indeed, but there would be perfect truth in asserting, that the sensations which are themselves *indifferent*, are more precious, even in relation to happiness itself, than the sensations which are themselves accompanied with lively delight, or rather, of which it is the very essence to be delightful. Happiness, though necessarily involving present pleasure, is the direct or indirect, and often the

* On the Intellectual Powers, Essay II. c. 16.

very distant result of feelings of every kind, pleasurable, painful, and indifferent. It is like the beautiful profusion of flowers, which adorn our summer fields. In our admiration of the foliage, and the blossoms, and the pure airs and sunshine, in which they seem to live, we almost forget the darkness of the soil in which their roots are spread. Yet how much should we err, if we were to consider them as deriving their chief nutriment from the beams that shine around them, in the warmth and light of which we have wandered with joy. That delightful radiance alone would have been of little efficacy, without the showers, from which, in those very wanderings, we have often sought shelter at noon; or at least without the dews, which were unheeded by us, as they fell silently and almost insensibly on our evening walk.

With the common division of our sensations into five classes,—those of smell, taste, hearing, sight, touch, we have been familiar, almost from our childhood; and though the classification may be far from perfect, in reference to our *sensations themselves*, considered simply as *affections of the mind*, it is sufficiently accurate, in reference to the mere *organs of sense*; for, though our sensations of *heat* and *cold*, in one very important respect, which is afterwards to be considered by us, have much less resemblance to the other sensations which we acquire by our *organs of touch*, or at least to sensations, which we are generally supposed to derive from that organ, than to sensations, which we receive by the medium of *other organs*, our sensations of smell and sound for ex-

ample—still, as they arise from an affection of the *same organ*, they may be more conveniently referred to the *same*, than to any other class; since, if we quit that *obvious* line of distinction, which the difference of organs affords, we shall not find it easy to define them by other lines as precise.

But whatever may be the arbitrary division or arrangement which we may form either of our *sensations themselves*, or of the organs that are previously affected, the *susceptibility of the mind*, by which it is capable of being affected by the changes of state in our mere bodily organs, must be regarded as, in every sense of the word, of *primary* value in our mental constitution. To the individual, indeed, it may be said to be in itself all the things which are around him, however *near* or *afar;* because it is truly that, by which alone all things near or afar become known to him. It constitutes by this mutual relation, which it establishes, a power of more than magic agency, before which the great gulph, that appeared to separate for ever the worlds of matter and of spirit, disappears,—which thus links together substances, that seemed, in their nature, incapable of any *common bond of union*,—and which, bringing the whole infinity of things, *within the sphere of our own mind*, communicates to it some faint *semblance* of the *omnipresence* of its Author. "What is that organ,"—says an eloquent French writer, speaking of the eye,—"what is that astonishing organ, in which all objects acquire, by turns, a successive existence,—where the spaces, the figures, and the motions, that surround me, are as it were

created,—where the stars, that exist at the distance of a hundred millions of leagues, become a part of myself,—and where, in a single half inch of diameter, is contained the universe?" This power of external sense, which first awakes us into life, continues, ever after, to watch, as it were, round the life which it awoke, lavishing on us perpetual varieties of instruction and delight; and if, from the simple pleasures, and simple elementary knowledge which it immediately affords, we trace its influence, through all the successive feelings to which it indirectly gives rise, it may be said to exist, by a sort of intellectual and moral *transmutation*, in the most refined and ethereal of all our thoughts and emotions. What Gray says of it,—in the commencement of his beautiful fragment De Principiis Cogitandi, addressed to his friend West, is not too high a panegyric,—that every thing delightful and amiable, friendship and fancy, and wisdom itself, have their primary source in it.

"Non illa *leves* primordia motus
Quanquam parva, dabunt. Lætum vel amabile quicquid
Usquam oritur, trahit hinc ortum; nec surgit ad auras,
Quin ea conspirent simul, eventusque secundent.
Hinc variæ vitaï artes, ac mollior usus,
Dulce et amiçitiæ vinclum: Sapientia dia
Hinc roseum accendit lumen, vultûque sereno,
Humanas aperit mentes, nova gaudia monstrans.
Illa etiam, quæ te (mirùm) noctesque diesque
Assiduè fovit inspirans, linguamque sequentem
Temperat in numeros, atque horas mulcet inertes,
Aurea non aliâ si jactat origine Musa." *

* Lib. I. v. 18—25. and 28—31.

So much, indeed, of human knowledge, and of all that is valuable and delightful in human feeling, *involves* these elementary sensations, as it were in the very essence of the thoughts and feelings themselves, that one of the most acute of modern French metaphysicians, and, with scarcely an exception, all the philosophers of the Freneh metaphysical school, who are his followers, have considered *the whole variety of human consciousness*, as *mere sensation* variously *transformed;* though, in stating the nature of this *transformation*, and the difference of the sensations *as transformed* from the *primary forms of mere external feeling*, they have not been so explicit, as the assertors of a system so paradoxical ought assuredly to have been. On the fallacies of this very prevalent theory of the mind, however, which is afterwards to be examined by us fully, I need not at present make any remarks.

Though this excessive simplification of the phenomena of human thought and feeling is, however, far more than the phenomena truly allow, it is not the less certain, that all the varieties of our consciousness, though not mere *transformations* of external sense, are, when traced to their source, the *results* of sensation, in its various original forms. In inquiring into the phenomena of our senses, then, we begin our inquiry, where knowledge itself begins, and though the twilight, which hangs over this first opening of intellectual life, is perhaps only a *presage*, or a *part* of that obscurity which is to attend the whole track of human investigation, it still is

twilight only, not absolute darkness. We can discover *much*, though we cannot discover *all*; and where absolute *discovery* is *not* allowed, there is still left to us a probability of conjecture, of which, in such limited circumstances, even philosophy may justly avail herself, without departing from her legitimate province.

LECTURE XIX.

BRIEF NOTICE OF THE CORPOREAL PART OF THE PROCESS, IN SENSATION.

THE mental phenomena, of the class which is at present under our consideration, being those, which arise, *in consequence of certain previous affections of our organs of sense*, it is necessary, that we should take *some* notice of the corporeal part of the process; though it must always be remembered, that it is the last part of the process, *the mental affection only*, which truly belongs to our science,—and that, if *this*, in all its varieties, had been the result of any other species of affections of organs constituted in any other manner,—as long as there was *the regular correspondence* of *certain mental affections* with *certain organic affections*,—the *philosophy of mind* would have continued *precisely the same as now*. Our systems of anatomy, and of the physiology of our mere bodily frame, would indeed have been different,—but not that more intimate physiology, which relates to the functions of the animating spirit, whose presence is life, and without which our bodily frame, in all its beautiful adaptation of parts to parts, is a machine, as inert and powerless, as the separate atoms that compose it.

The great essential *organ* of all *sensation* is the *brain, with its appendages*, particularly the *nerves* that issue from it to certain *organs*, which are more strictly termed the *organs of sense;* as it is there the immediate *objects*, or external causes of sensation, the particles of light, for example, in vision, or of odour in smell, arrive, and come, as it were, into contact with the sensorial substance. Each organ, as you well know, has objects peculiar to itself, which it would be superfluous to enumerate; and since the blind are still sensible of sound, the deaf of colour, and both of smell, and taste, and touch, there must evidently be some difference, either in the sensorial substance itself, which is diffused over the different organs, or in the mode of its diffusion and exposure in the different organs, from which this striking diversity of their relative sensibilities proceeds. The nervous matter, however, considered separately from the coats in which it is enveloped, is of the same half-fibrous, but soft and pulpy texture, as the substance of the brain itself, *and is in perfect continuity with that substance*, forming, therefore, with it, what may be considered as *one mass*, as much as the whole brain itself may be considered as one mass; which has, indeed, for its chief seat the great cavity of the head; the

> "Superas hominis sedes, arcemque cerebri;
> Namque illic posuit solium, et sua templa sacravit,
> Mens animi;—*

but which extends, by innumerable ramifications, over the whole surface, and through the internal

* Gray de Princip. Cogit. lib. i. v. 48.—50.

parts of the body. The mind, in that central brain in which it is supposed to reside, communicating with all these extreme branches, has been compared, by a very obvious, but a very beautiful similitude, to the parent Ocean, receiving from innumerable distances the waters of its filial streams:

> "Ac uti longinquis descendunt montibus amnes,
> Velivolus Tamisis, flaventisque Indus arenæ,
> Euphratesque, Tagusque, et opimo flumine Ganges,
> Undas quisque suas volvens,—cursûque sonoro
> In mare prorumpunt: hos magno acclinis in antro
> Excipit Oceanus, natorumque ordine longo
> Dona recognoscit venientûm, ultròque serenat
> Coeruleam faciem, et diffuso marmore ridet.
> Haud aliter species properant se inferre novellæ
> Certatim menti." *

In the brain itself, the anatomist is able to shew us, with perfect clearness, many complicated parts, which we must believe to be adapted for answering particular purposes in the economy of life; but when we have gazed with admiration on all the wonders which his dissecting hand has revealed to us, and have listened to the names with which he *most accurately* distinguishes the little cavities or protuberances which his knife has thus laid open to our view, we are still *as ignorant as before* of the particular purposes to which such varieties of form are subservient; and our only consolation is,—for there is surely some comfort in being only *as* ignorant as the *most learned*,—that we know as *much* of the distinct uses of the parts as the anatomist himself,

* Gray de Princip. Cogit. lib. i. v. 54.—63.

who exhibits them to us, and teaches us how to name them. A structure, *in every respect different*, though assuredly less fit than the present, *which has been chosen by infinite wisdom*, might, *as far as we know*, have answered exactly the same end; which is as much as to say, that *our ignorance on the subject is complete*. The only physiological facts of importance, in reference to sensation, are, that if the nerves, which terminate in particular organs, be *greatly* diseased, the sensations which we ascribe to those particular organs cease; and cease, in like manner, if the continuity of the nerves be destroyed, by cutting them in any part of their course, or if, without loss of absolute continuity, their structure in any part of their course be impaired by pressure, whether from tight ligatures drawn around them for the purpose of experiment, or from natural morbid causes. In short, if the brain and nerves be in a sound state, and certain substances be applied to certain parts of the nervous system,—as, for instance, sapid bodies to the extremities of the nerves of taste, or light to that expansion of the optic nerve, which forms what is termed the retina,—there is then *instant sensation;* and when the brain itself is *not* in a sound state to a certain extent, or when the nerve which is diffused on a particular organ is, either at this extremity of it, or in any part of its course, *to a certain degree impaired, then* there is *no* sensation, *though* the same external causes be applied. This very slight general knowledge of the *circumstances* in which sensation takes place, and of the *circumstances* in which it does NOT take place,

is all the knowledge which physiology affords us of the corporeal part of the process;—and it is likely to continue so for ever,—at least in all the more important respects of our ignorance,—since any changes which occur in the *corpuscular motion*, and consequent *new arrangement* of the particles of the substance of the brain and nerves, corresponding with the diversities of feeling during those particular states,—if such corpuscular motions or changes do really take place,—are probably far too minute to be observable by our organs; even though we could lay open all the internal parts of the brain to complete observation, without destroying, or at all affecting, the usual phenomena of life:—

> In "following life through creatures we dissect,
> We lose it, in the moment we detect."

Indeed, we are not able to do even so much as this; for life has *already vanished*, long before we have come upon the verge of its secret precincts. It is like a Magician, that operates at a distance on every side, but still keeps himself apart, within a narrow circle. If we remain *without* the circle, we may gaze with never-ceasing admiration, on the wonders that play in rapid succession before our eyes. But, if we rush within, to force an avowal of the secret energy that produces them, the enchanter and the enchantments alike are fled.

The brain, then, and the various nerves of sense in continuity with it, may, when taken together, be considered as forming *one* great organ, which I would term briefly the *sensorial organ*, essential to life,

and to the immediate production of those mental phenomena which constitute our sensations, and, perhaps, too, modifying in some measure, directly or indirectly, all the other phenomena of the mind.

" Dum mens alma caput cerebrique palatia celsa
Occupat, et famulos sublimis dirigit artus,
Et facili imperio nervorum flectit habenas,
Illius ad nutum sensus extranea rerum
Explorant signa, et studio exemplaria fido
Ad dominam adducunt; vel qui statione locantur
Vicinâ, capitisque tuentur limina, ocelli,
Naresque, auriculæque, et vis arguta palati;
Vel qui per totam currit sparso agmine molem
Tactus, ad extremas speculator corporis aras.
His sensim auxiliis instructa fidelibus, olim
Mens humilis nulloque jacens ingloria cultu
Carceris in tenebris mox sese attolit in auras
Dives opum variarum, et sidera scandit Olympi."

Of the nature of the connection of this great sensorial organ with the sentient mind, we never shall be able to understand *more* than is involved in the *simple fact*, that *a certain affection of the nervous system precedes immediately a certain affection of the mind.* But, though we are accustomed to regard this species of mutual succession of bodily and mental changes, as *peculiarly* inexplicable, from the very different nature of the substances which are reciprocally affected, it is truly *not more so* than any other case of succession of events, where the phenomena occur in substances that are not different in their properties, but analogous, or even absolutely similar; since, in *no one* instance of this kind, can we perceive more than the *uniform order of the succession*

itself; and of changes, the successions of which are all *absolutely inexplicable,* or, in other words, absolutely simple, and unsusceptible, therefore, of further analysis, none can be justly said to be more or less so than another. That a *peculiar state* of the *mere particles of the brain,* should be *followed* by a change *of state* of the *sentient mind, is* truly wonderful; but if we consider it strictly, we shall find it to be by no means *more* wonderful, than that the arrival of the *moon,* at a certain point of the heavens, should render the *state* of a *body* on the *surface of our earth,* different from what it otherwise would naturally be or that the state of every particle of our globe, in its relative tendencies of gravitation, should be instantly changed, as it unquestionably *would be,* by the destruction of the most distant satellite of the most distant planet of our system, or, probably too, by the destruction even of one of those remotest of stars, which are illuminating their own system of planets, so far in the depth of infinity, that their light, —to borrow a well-known illustration of sidereal distance,—may never yet have reached our earth, since the moment at which they darted forth their first beams, in the creation of the universe. We believe, indeed, with as much confidence, that one event will uniformly have for its consequent *another event,* which we have observed to follow it, as we believe the simple fact that it *has* preceded it, in the particular case observed. But the *knowledge* of the *present sequence,* as a mere fact, to be remembered, and the *expectation* of future similar sequences, as the result of an original law of our belief, are *precisely of*

the same kind, whether the sequence of changes be in mind, or in matter *singly*, or *reciprocally in both*.

What the nature of the *change* is, that is produced at the *extremity of the nerve*, it is beyond our power to *state*, or even to *guess*; and we are equally ignorant of the manner in which this affection of the nerve is communicated, or is supposed to be communicated, to the brain. But that *some* affection is *gradually propagated*, from the one to the other, so as to render the change in the *state of the brain subsequent*, by a certain interval, to the change in the *state of the nerve*, is universally believed. In applying to this change the term *impression*, a term indeed which had been in common use before, Dr Reid is careful to point out the reason for which this term appears to him preferable to others; and though I confess that the word seems to me to convey too much the notion of a peculiar well known species of action; that which consists in producing a certain configuration of the object *impressed*, corresponding with the figure of the *impressing* object, the very notion that has had so pernicious an effect in the theory of perception; and though I conceive the simple term *change* or *affection* to be all which is safely admissible, as long as the *nature* of the *particular change* is absolutely unknown; still it must be confessed that *impression* is a term a little *more* general than the other names of action, to which Dr Reid alludes, and therefore *preferable* to *them*, in the present case.

"There is sufficient reason," he says, "to conclude, that, in perception, the object produces some

change in the organ; that the organ produces some change upon the nerve; and that the nerve produces some change in the brain. And we give the name of an *impression* to those changes, because we have not a name more proper to express, in a general manner, any change produced in a body, by an external cause, without specifying the nature of that change. Whether it be pressure, or attraction, or repulsion, or vibration, or something unknown, for which we have no name, still it may be called an impression. But with regard to the particular kind of this change or impression, philosophers have never been able to discover any thing at all."*

That the word *impression* is not so free, as Dr Reid supposes, from that hypothetical meaning which he wished to avoid, I have already remarked. But the *reason* assigned by him for his preference of it, is unquestionably a just one; since a phrase which expresses the *least possible knowledge*, must be allowed to be the best suited to *human ignorance*,—that ignorance, which, not in the philosophy of intellect only, but in whatever track of science we may proceed, and whatever truths we may proudly discover in our way, still meets us at the end of every path, as if to mock at once our weakness and our pride,—and which seems to us to be everywhere, because it is, *wherever we are ourselves*. The splendour of nature, as it exists in itself, is, if I may speak figuratively, like sunshine on a boundless plain, on the flowers and herbage of which, though there be

* On the Intellectual Powers, Essay II. chap. ii.

innumerable *varieties of colour*, there is *brilliancy* in *all*. But the misfortune is, that, as soon as we have approached near enough to distinguish the diversity of tints, their brilliancy is so obscured by our very approach to them, that their nice diversities are no longer distinguishable; as if man could not move along, without throwing his own shadow on every thing before him.

When I say, that we are ignorant of the nature of that change, which is propagated along the nerve to the brain, I speak in reference to an opinion that is universal. But, though it may be *improbable*, it is certainly far from *impossible*, that there is really *no* such *progressive communication*, as this which is supposed. The brain and nerves, though, from the difference of names, you might be led, perhaps, to consider them as distinct, I have already said, are not separate organs, but are in continuity with each other, at least as much as various parts of the *brain* itself, which are comprehended under that single term, can be said to be continuous. When taken together, they form what is truly *one complicated sensorial organ*,—the organ of all our sensations, according to the different states in which the organ exists, or the different parts of it which are chiefly affected. In *hearing*, for example, a certain state of that part of the sensorial organ, which constitutes the auditory nerves,—in vision, a certain state of that part of it, which constitutes the optic nerves, is necessary to sensation,—and, in both cases, accord-

ing to the universal supposition on the subject, all or part of the *brain* likewise must exist *in a certain state*, of which we know nothing more, than that it is followed, in the one case, by the sensation of sound, in the other case, by that of sight. The connection of the mind with the bodily frame,—which must be equally inexplicable on every supposition that can be formed,—is not supposed, by any philosopher, to depend on the state of a *single physical point of the brain alone*; and, if it extend to more than *one* such point, there is nothing,—in the nature of the connexion itself, independently of experience,—which necessarily limits it to one portion of the complex sensorial organ, more than to *another*,—to the particles of the central mass of the brain, for example, more than to those of the nerve itself. It is experience, then, to which we are referred; and experience, though it shows that certain nerves are not essential to *life*, since life continues equally, after they may have been impaired, or even destroyed, is far from showing that an affection of them is not essential to *sensation*, at the very moment of the particular sensation; nor does it afford even the slightest evidence, to justify the belief, that the *only* use of the nerve is to communicate a certain affection to the brain, which affection of the mere central part of the sensorial organ, would, *of itself*, immediately induce sensation, *though* the nerves were *annihilated in the preceding instant*. The sensation may be the immediate effect, not of the state of *the brain only*, but of the state of the brain, *and* of any parti-

cular nerve, *considered as existing together at the moment;* in the same manner, as, by those who ascribe the immediate origin of sensation to the *mere brain, exclusive of its nervous appendages,* it is supposed to depend on the state, not of *one* physical point of the central brain, but on the state of *many such co-existing points.* We know not, to what extent, in the great sensorial organ, this change is necessary; but we believe, that, to *some extent,* it is necessary; and the question is, whether, in the whole portion so affected, the affection be produced by a *succession of changes, propagated* from *part* to *part?* This may, perhaps, be the more probable supposition:—but, whatever may be the comparative probability or improbability, it certainly has not been demonstrated by observation or experiment; nor can there be said to be, *a priori,* any absurdity in the opposite supposition, that the sensorial affection, to whatever extent it may be necessary, is not *progressive,* but *immediate,*—that, as long as the sensorial organ, (under which term I comprehend, as I have already frequently repeated, not the brain merely, but also its nervous appendages, that exist in apparent continuity with the brain,) is unimpaired, by accident or disease, the presence of the immediate object of sense, at the external organ, which, on every supposition, must be followed by some sensorial change of state, is *instantly* followed by that *general change of state of the internal organ,* whatever it may be, which is necessary to sensation, in the particular case; in the same manner, as the presence of a celestial

body, at a certain point in the heavens, is *immediately* followed by a change of state, in the *whole* gravitating particles of our globe; the change in any long line of these gravitating particles being not *communicated* from *each to each*, but depending only on the presence of the distant sun or planet; and beginning in the most remote particles of the line, at the very same instant, as in that which is nearest, on the surface of the earth. An *instant change*, in the *long* line of *sensorial* particles,—if the affection of a long line of these particles be necessary,—on the presence of a particular object, is not more improbable in itself, than this *instant and universal* influence of gravitation, that varies with all the varying positions of a distant object.

But is it, indeed, certain, that, in sensation, there *is* an affection of the central brain, whether immediate or progressive? Is it not possible, at least, or more than possible, that the state of the mind, when we perceive colours and sounds, may be the immediate consequent of the altered state of that part of the sensorial organ, which forms the expansion of the nerve in the eye or ear? The sensations must be supposed, in every theory, to be the consequents of states induced in some sensorial particles, and there is nothing but the mere names of brain and nerve, invented by ourselves, and the notions which we have chosen, without evidence, to attach to these mere names, which would mark the sensorial particles in the nervous expanse itself, as less fitted to be the *immediate* antecedents of sight and hearing, than

the similar sensorial particles in any portion of the central mass of the brain. There is no reason, in short, *à priori*, for supposing that a state of the sensorial particles of the nerves cannot be the cause of sensation, and that the sensation must be the effect of a state equally unknown, of apparently similar particles, in that other part of the general sensorial organ, which we have denominated the brain. Sensation, indeed, is prevented by decay, or general disease of the brain, or by separation of the nerve, or pressure on it, in any part of its course. But it is far from improbable, that these causes, which must evidently be injurious to the organ, *may* act, merely by preventing that sound state of the nerve, which is necessary for sensation, and which, in an organ so very delicate, may be affected by the slightest influences,—by influences far slighter, than may naturally be expected to result from such an injury of such a part. The nerves and brain, together, form one great organ; and a sound state of the whole organ, even from the analogy of other grosser organs, may well be supposed to be necessary for the healthy state and perfect function of each separate part.

If, indeed, the appearance of the brain and nerves were such, as marked them to be peculiarly fitted for the communication of motion of any sort, there might be some presumption, from this very circumstance, in favour of the opinion, that sensation takes place, only after a progressive series of affections of some sort, propagated along the nerve to the interior brain. But it must be remembered, that the nature, both of the substance of the nerves themselves, and of the

soft and lax substance, in which they are loosely embedded, renders them very ill adapted for the communication of nice varieties of motion, and gives some additional likelihood, therefore, to the supposition, that affections of the sensorial organ, so distinct as our sensations are from each other, and so *exactly* corresponding with the *slightest* changes of external objects, do *not* depend on the progressive communication of *faint and imperceptible motion*, in circumstances so unfavourable to the uninterrupted progress even of that *more powerful motion*, which can be measured by the eye. In a case so doubtful as this, however, in which the intervening changes supposed by philosophers,—if such a progressive series of motions do really take place,—are confessed to be beyond our observation, it is impossible for any one, who has a just sense of the *limits*, which nature has opposed to our search, to pronounce with *certainty*, or even perhaps with that faint species of belief, which we give to mere *probability*. My conjectures on the subject, therefore, I state simply as conjectures, and nothing more.

If, indeed, what is but a mere conjecture could be shown to be well founded, it would add another case to the innumerable instances, in which philosophers have laboured, for ages, to explain what did not exist,—contenting themselves, after their long toil, with the skill and industry which they have exhibited, in removing difficulties, which they had before, *with great skill and industry*, placed in their own way. "I am not so much convinced of our radical ignorance," says an ingenious writer, "by the

things that *are*, of which the nature is hid from us, as by the things that *are not*, of which notwithstanding we contrive to give a very tolerable account; for this shews that we are not merely without the principles which lead to *truth*, but that there are other principles in our nature, which can accommodate themselves very well, and form a close connexion, with what is positively *false*."

But whatever reason there may be for removing *this* supposed link of the corporeal part of the process of sensation, there is another prior link, which it appears to me of great importance to separate from the chain. I allude to the distinction, which is commonly made, of the objects of sense, as acting *themselves* on our organs, or as acting through what is termed a *medium*.

"A second law of our nature," says Dr Reid, "regarding perception is, that we perceive no object, unless some impression is made upon the organ of sense, either by the immediate application of the object, or by some medium which passes between the object and the organ. In two of our senses, to wit, *touch* and *taste*, there must be an immediate application of the object to the organ. In the other three, the object is perceived at a distance, but still by means of a medium, by which some impression is made upon the organ. The effluvia of bodies drawn into the nostrils with the breath, are the medium of smell; the undulations of the air, are the medium of hearing; and the rays of light passing from visible objects to the eye, are the medium of sight. We see

no object, unless rays of light come from it to the eye. We hear not the sound of any body, unless the vibrations of some elastic medium, occasioned by the tremulous motion of the sounding body, reach our ear. We perceive no smell, unless the effluvia of the smelling body enter into the nostrils. We perceive no taste, unless the sapid body be applied to the tongue, or some part of the organ of taste. Nor do we perceive any tangible quality of a body, unless it touch the hands, or some part of our body."*

It is evident, that, in these cases of a supposed medium, which Dr Reid considers as forming so important a distinction of our sensations, the real object of *sense* is not the *distant* object, but that which acts immediately upon the organs,—the *light* itself, not the *sun* which beams it on us,—the *odorous particles*, which the wind has wafted to us from the rose, not the *rose itself* upon its stem,—the vibrations of the air, within our ear, not the cannon that is fired at the distance of miles. The *light*, the *odour*, the *vibrating air*, by which alone our senses are affected, act on our nerves of *sight*, of *smell*, and *hearing*, with an influence as direct, and as little limited in the kind of action, as that with which the *fruit*, which we eat or handle, acts on our nerves of *taste* or *touch*. This influence of the objects *immediately external* is all, in which our organs of sense, and consequently the mind *as the*

* On the Intellectual Powers, Essay II. chap. ii.

principle of mere sensation, is concerned. The *reference* to the *distant sun*, or *rose*, or *cannon*, which alone leads us to speak of a *medium* in any of these cases, is the effect of *another* principle of our intellectual nature,—the principle of association, or suggestion,—that is afterwards to be considered by us, without which, indeed, our mere transient sensations would be comparatively of little value; but which, as a quality or susceptibility of the mind, is not to be confounded with that, by which the mind becomes instantly sentient, in consequence of a *certain change produced in the state of its sensorial organ.*

Since, however, precisely the same series of changes must take place in nature, whether we class the sun, the flower, the cannon, as the objects of sense, or merely the light, the odorous particles, and the vibrating air, it may perhaps be thought, that the distinction now made is only a *verbal* one, of no *real importance.* But it will not appear such to those who are conversant with the different theories of perception which we are afterwards to review; many of which, that have had the greatest sway, and a sway the most fatal to the progress of intellectual philosophy, appear, to me, to have arisen entirely, or at least chiefly, from this very misconception as to the real external object of sense. It is sufficient at present to allude to the effect, which the mere *distance* of the supposed *object* must have had, in giving room to all the follies of imagination *to fill up the interval.*

It may be necessary, however, to remark by the way, that though I do not conceive the bodies,

which act through a medium, as it is said, to be the real objects of the particular sense;—the immense orb of the sun, for example, in all its magnitude, to be the object of that small organ by which we are sensible of light; or the cannon, which exists we know not where, to be the object of that organ by which we are sensible of sound;—I am still far from objecting to the popular and very convenient *phraseology*, by which we speak of *seeing the sun*, and *hearing the cannon*—a phraseology that expresses briefly a reference, which could not otherwise be expressed but by a very awkward circumlocution, and to make any innovation in which would be as absurd, as to reject the popular phrases of the *sun's rising and setting* merely because they are inconsistent with our astronomical belief. The most rigid philosophy can require no more, than that, when we talk of the *sun's actual setting*, we should mean by it, only a certain position relative to that great luminary at which the earth arrives in its diurnal revolution,—and that, when we talk of *seeing* it descend, we should mean nothing more, than that we *see light* of a certain brilliancy, from which we *infer* the existence and relative position of the orb that has projected it.

I have been led into these observations, on the various parts of the corporeal process which precedes sensation, by the desire of removing, as much as possible, any obscurity in which your notions on the subject might be in olved,—as I know well the influence which even a slight confusion in our notion

of any *part* of a *complicated process* has, in spreading, as it were, its own darkness and perplexity over parts of the process, which otherwise we should have found no difficulty in comprehending. You might think, that you knew less distinctly the mental sensation itself, because you knew only *obscurely* the series of bodily changes that precede sensation; but still it must be remembered, that it is only the *last link of the corporeal chain*,—the ultimate affection of the sensorial organ, in whatever manner and to whatever extent it may be affected,—*immediately antecedent to the affection of the mind*, which is to be considered as that with which nature has united the corresponding change in our mental frame. This mysterious influence of our *bodily* on our *mental* part, has been poetically compared to that which the sun was supposed to exercise on a lyre, that formed part of a celebrated Egyptian statue of Memnon, which was said to become musical when struck with its beams; and though the poet has extended the similitude, beyond our mere *elementary sensations*, to the complex perception of beauty, it is still a very happy illustration—as far as a mere poetic image can be an illustration—of the power which matter exercises over the harmonies of mind:—

> "For as old Memnon's image, long renown
> By fabling Nilus, to the quivering touch
> Of Titan's ray, with each repulsive string
> Consenting, sounded through the warbling air
> Unbidden strains,—even so did Nature's hand,
> To certain species of external things
> Attune the finer organs of the mind.
> So the glad impulse of congenial powers,

Or of sweet sound, or fair proportion'd form,
The grace of motion, or the bloom of light,
Thrills through Imagination's tender frame,
From nerve to nerve. All naked and alive,
They catch the spreading rays; till now the soul
At length discloses every tuneful spring,
To that harmonious movement from without
Responsive. Then the charm, by Fate prepar'd,
Diffuses its enchantment.[x] Fancy dreams
Of sacred fountains, and Elysian groves,
And vales of bliss! the Intellectual Power
Bends from his awful throne a wondering ear,
And smiles; the Passions, gently soothed away,
Sink to divine repose; and Love and Joy
Alone are waking." *

When we consider the variety of our feelings thus wonderfully produced,—the *pleasures*, and, still more, the inexhaustible *knowledge*, which arise, by this mysterious harmony, from the imperceptible affection of a few particles of nervous matter, it is impossible for us not to be impressed with *more* than admiration of that Power, which even our ignorance, that is scarcely capable of seeing any thing, is yet, by the greatest of all the bounties of heaven, able to perceive and admire. In the creation of this internal world of thought, the Divine Author of our being has known how to combine *infinity itself* with that which may almost be considered as the most

* Pleasures of Imagination, Book I. v. 109—131.

[x] "Then the charm," &c. to "enchantment," from the second form of the Poem. The corresponding clause, in the first form, from which all the rest of the quotation is taken, is this,

"Then the inexpressive strain
Diffuses its enchantment."

finite of things; and has *repeated*, as it were, in every mind, by the almost creative sensibilities with which He has endowed it, that simple but majestic act of omnipotence, by which, originally, He called from the rude elements of chaos, or rather from nothing, all the splendid glories of the universe.

LECTURE XX.

PARTICULAR CONSIDERATION OF OUR SENSATIONS.—NAMELESS TRIBES OF SENSATIONS—SENSATIONS OF SMELL—OF TASTE—OF HEARING.

A CONSIDERABLE portion of my last Lecture, Gentlemen, was employed in illustrating the *corporeal* part of the process of *perception*, which, though less immediately connected with our Science than the *mental part* of the process, is still, from its intimate connection with this mental part, not to be altogether neglected by the intellectual inquirer. The importance of clear notions of the mere *organic changes* is, indeed, most strikingly exemplified in the very false theories of perception which have prevailed, and in some measure still prevail; and which evidently, in part at least, owe their origin to those confused notions, to which I alluded in my last Lecture, of the objects of perception, as supposed to operate at a distance through a medium, and of complicated series of changes supposed to take place in the nerves and brain.

In considering the Phenomena of our Mind, *as they exist when we are capable of making them subjects of reflection*, I mentioned to you, in a former Lecture, that although we have to encounter many *additional* difficulties, in consequence of early associations, that modify for ever after our original elementary feelings, with an influence that is *inappreciable* by us, because it is truly *unperceived*, there are yet *some advantages*, which, though they do not fully *compensate* this evil, at least enable us to make some *deduction* from its amount. The benefit, to which I allude, is found chiefly in *the class of phenomena which we are now considering*,—a class, indeed, which otherwise we should not have regarded as *half* so *comprehensive* as it truly is, since, but for our previous belief of the existence of a permanent and independent system of external things acquired from other sources, we should have classed by far the greater number of the feelings, which we now refer to *sense*, among those which arise *spontaneously* in the mind, *without any cause external to the mind itself*.

Though the sensations, which arise from affections of the same organ—as those of *warmth* and *extension* for example, or at least the feeling of warmth and a *tactual* feeling, that is *commonly* supposed to involve extension, from affections of the *same nerves of touch*,—are not, in every case, more analogous to each other, than the sensations which arise from affections of different organs,—and though, if we were to consider the *sensations alone*, therefore, without reference to their organs, we

might not form *precisely the same classification* as at present,—the division, *according to the organs affected*, in most cases corresponds, so exactly, with that which we should make, in considering the *mere sensations as affections of the mind*, and affords in itself a principle of classification, so *obvious* and *definite*, that we cannot hesitate, in preferring it to any other which we might attempt to form. In the arrangements of every science, it is of essential consequence, that the lines of difference, which distinguish one class from another, should be *well marked;* and this advantage is peculiarly important in the science of mind, the objects of which do not, as in the other great department of nature, *outlast inquiry*, but are, in every case, so very shadowy and fugitive, as to *flit* from us, in the very glance, that endeavours to catch their almost imperceptible outline.

In examining, then, *according to their organs*, our classes of sensation;—and considering *what feelings* the organic affections excite *at present*, and *what* we may suppose them to have excited *originally*,—I shall begin with those which are *most simple*, taking them in the order of *smell, taste, hearing*,—not so much, from any hope, that the information, which these afford, will throw any great light on the more complex phenomena of *sight* and *touch*, as because the consideration of them is *easier*, and may *prepare* you *gradually* for this *difficult analysis*, which awaits us afterwards, in the examination of those more perplexing phenomena.

I begin, then, with the consideration of that very simple order of our sensations which we ascribe to our organ of

SMELL.

THE organ of smell, as you well know, is principally in the *nostrils*,—and partly also in some continuous cavities on which a portion of the olfactory nerves is diffused.

> Naribus interea consedit odora hominum vis
> Docta leves captare auras, Panchaïa quales
> Vere novo exhalat, Floræve quod oscula fragrant
> Roscida, cum Zephyri furtìm sub vesperis horâ
> Respondet votis, mollemque aspirat amorem. *

When the particles of odour affect our nerves of smell, a *certain state of mind* is produced, varying with the nature of the odoriferous body. The *mere existence of this state*, is all the information which we could originally have received from it, if it had been excited previously to our sensations of a different class. But, *with* our present knowledge, it seems *immediately* to communicate to us much more important information. We are not merely *sensible of the particular feeling*, but we refer it, *in the instant*,—almost in the same manner, as if the reference itself were *involved* in the sensation,—to a *rose*, *hemlock*, *honeysuckle*, or any other sub-

* Gray de Principiis Cogitandi, Lib. I. v. 130—134.

stance, agreeable or disagreeable; the immediate presence, or vicinity of which we have formerly found to be attended with this particular sensation. The power of making the *reference*, however, is unquestionably derived from a source *different* from that, from which the *mere sensation* is immediately derived. We must *previously* have *seen*, or *handled*, the *rose*, the *hemlock*, the *honeysuckle*; or if, without making this *particular* reference, we merely consider our sensation of smell as caused by *some* unknown object external to our mind, we must at least have previously seen or handled some other bodies, which excited, at the same time, sensations *analogous* to the present. If we had been endowed with the sense of smell, *and with no other sense whatever*, the sensations of this class would have been *simple feelings of pleasure or pain*, which we should as little have ascribed to an *external cause*, as any of our spontaneous feelings of joy or sorrow, that are equally lasting or equally transient. Even at present, after the connexion of our *sensations of a fragrance* with the *bodies* which we term *fragrant*, has been, in a great measure, fixed in our mind, by innumerable reflections, we still, if we attend to the process of the *reference itself*, are conscious of a suggestion of remembrance, and can separate the *sensation*, as a *mere feeling of the mind*, from the *knowledge* of the *object or external cause of the sensation*, which seems to us a *subsequent* state of the mind, however close the succession may be. Indeed, what is there which we can discover, in the mere *sensation of fragance*, that is itself

significant of *solidity, extension,* or whatever we may regard as essential to the existence of things without? *As a mere change in the form of our being,* it may suggest to us the necessity of *some* cause or antecedent of the change. But it is far from implying the *necessity* of a corporeal cause;—any more than such a direct *corporeal cause* is implied in any other modification of our being, intellectual or moral,—in our belief, for example, of the *most abstract truth,* at which we may have arrived by a slow developement of proposition after proposition, in a process of internal reflective analysis,—or in the most refined and sublime of our *emotions,* when, without thinking of any one of the *objects around,* we have been meditating on the Divinity who formed them —himself the purest of spiritual existences. Our belief of a *system of external things,* then, does not, as far as we can judge from the nature of the feelings, arise from our sensations of *smell,* more than from any of our *internal pleasures or pains;* but we class our sensations of smell *as sensations,* because we have previously believed in a system of external things, and have found, by uniform experience, that the introduction of some new external body, either felt or seen by us, was the antecedent, of *those states of mind which we denominate sensations of smell,* and *not* of those internal pains or pleasures, which we therefore distinguish from them, as the spontaneous affections of our own independent mind.

WITH the organ of *taste* you are all sufficiently acquainted. In considering the phenomena, which it presents, in the peculiar sensations that directly flow from it, it is necessary to make some little abstraction from the sensation of *touch*, which accompanies them, in consequence of the immediate application of the tangible sapid body to the organ; but the sensations, thus co-existing, are so very different in themselves, as to be easily distinguishable. When the organ of taste is in a sound state, the application of certain substances produces, immediately, that change or affection of the *sensorial organs*, which is attended with a corresponding change or affection of the *sensient mind*. In our present state of knowledge, we immediately refer this simple sensation, to something, which is *bitter*, or *sweet*, or *acrid*, or of some other denomination of sapid quality; and we have no hesitation, in classing the sensations *as sensations*,—effects of *laws of action* that belong *jointly* to *matter* and *mind*,—not as *feelings* that arise in the mind, from its *own independent constitution*. But, if we attend sufficiently to the feeling that arises in the case of taste, we shall find, however immediate the reference to a sapid body may seem to be, that it is truly *successive to the simple sensation*, and is the mere *suggestion* of *former experience*, when a body *previously recognized by us as an external substance*, was applied to our organ of taste;—in the same manner, as,

when we see *ashes* and *dying embers*, we immediately *infer* some previous *combustion*, which we could not have inferred, if combustion itself had been a phenomenon altogether unknown to us. In the simple sensation which precedes the reference,—the mere *pleasure of sweetness* or the mere *pain of bitterness*—there is nothing which seems to mark more distinctly the presence of *honey* or *wormwood*, or any similar external substance, than in any of our joys or sorrows, to which we have not given a name; and there can be no doubt, that, if the particular feeling which we now term *joy*, and the particular feeling which we now term *sorrow*, had been excited, whenever we knew, from other sources, that *certain bodies were applied to the tongue*, we should have considered these internal feelings *as sensations*, in the strict sense of the word, precisely in the same manner, as we now regard, as *sensations*, the feeling which we term *sweetness*, and the feeling which we term *bitterness*, because, like these sensations, they could not have failed to suggest to us, by the common influence of association, the presence and direct coincidence of the object without. In the case of *taste*, therefore, as in the case of *smell*, we could not, from the *simple sensations*,—if *these alone* had been given to us,—have derived any knowledge of *an external world*, of substances *extended* and *resisting*; but we consider them *as sensations*, in the strict philosophic meaning of the term, *because we have previously acquired our belief of an external world.*

It may be remarked of these two classes of sensations, now considered, that they have a greater *mutual resemblance*, than our sensations of any other kind. It is only a *blind man* who thinks, that what is called *scarlet* is like the sound of a trumpet; but there are *tastes* which we consider as like *smells*, in the same manner as we consider them to be like other tastes; and, if we had not acquired a distinct knowledge of the *seats* of our different organs, and had yet known that *smells* and *tastes* arose from external causes acting upon some one or other of these, we should probably have been greatly puzzled, in many cases, in our attempt to refer the particular *sensation* to its particular *organ*.

In considering the advantages which we derive from our organs of *smell* and *taste*, the mere pleasures which they *directly afford*, as a part of the general happiness of life, are to be regarded, *from their frequent occurrence*, as of no considerable amount. The fragrance of the fields enters largely into that obscure but delightful group of images, which rise in our minds on the mere names of *spring*, *summer*, the *country*, and seems to represent the very form of ethereal purity, as if it were the breath of heaven itself.

If we imagine all the innumerable flowers which nature pours out, like a tribute of incense to the God who is adorning her, again to be stripped, in a single moment, of their odour, though they were to retain all their bright diversities of colouring, it would seem as if they were deprived of a spirit which animates

them,—how cold and dead would they instantly become,—and how much should we lose of that vernal joy, which renders the season of blossoms almost a new life to ourselves.

> " In vain the golden Morn aloft
> Waves her dew-bespangled wing;
> With vermeil cheek and whisper soft
> She woos the tardy Spring;
> Till April starts, and calls around
> The sleeping fragrance from the ground."*

It is by this delightful quality that the tribes of vegetable life seem to hold a sort of social and spiritual *communion* with us. It is, as it were, the voice with which they address us, and a voice which speaks only of happiness. To him who walks among the flowers which he has tended,

> " Each odoriferous leaf,
> Each opening blossom, freely breathes abroad
> Its gratitude, and thanks him with its sweets."

The pleasures of the sense of *taste*, in the moderate enjoyment of which there is nothing reprehensible, are, in a peculiar manner, associated with *family happiness*. To *have met frequently at the same board*, is no small part of many of the delightful remembrances of friendship; and to meet *again* at the same board, after years of absence, is a pleasure that almost makes atonement for the long and dreary in-

* Gray on the Pleasure arising from Vicissitude, Stanza I. —In v. i. the original has, instead of " in vain," " now."

terval between. In some half-civilized countries, in which the influence of simple feelings of this kind is at once more forcible in itself, and less obscured in the confusion of ever varying frivolities and passions, this *hospitable bond* forms, as you well know, one of the strongest ties of mutual obligation, sufficient often to check the impetuosity of vindictive passions which no other remembrance could, in the moment of fury, restrain. Had there been no *pleasure* attached to a repast, independent of the mere *relief from the pain of hunger*, the coarse and equal food would probably have been taken by each individual *apart*, and might even, like our other animal necessities, have been associated with feelings which would have rendered solitude a duty of external decorum. It would not be easy, even for those who have been accustomed to trace a simple cause through all its remotest operations, to say, how *much of happiness*, and how much even of the warm tenderness of virtue, would be destroyed, by the change of manners, which should simply put an end to the *social meal;* that meal which now calls all the members of a family to suspend their cares for a while, and to enjoy that cheerfulness, *which is best reflected* from *others*, and which can be permanent only when it is so reflected, from *soul* to *soul*, and from *eye* to *eye*.

One very important advantage, more directly obvious than this, and of a kind which every one may be disposed more readily to admit, is afforded by our senses of smell and taste, in guiding our *selection of the substances* which we take as alimentary. To the other animals, whose senses of this order are so

much quicker, and whose instincts, in accommodation to their want of general *language*, and consequent difficulty of acquiring knowledge by *mutual communication*, are providentially allotted to them, in a degree, and of a kind, far surpassing the instincts of the slow but noble reflector *man*, these senses seem to furnish *immediate instruction* as to the substances proper for nourishment, to the exclusion of those which would be noxious. To *man*, however, who is under the guardianship of affections more beneficial to him than any instinct of his own could be, there is no reason to believe, that they do this *primarily*, and of *themselves*, though, in the state in which he is brought up, instructed with respect to every thing noxious or salutary, by those who watch constantly over him in the early period of his life, and having, therefore, *no necessity* to appeal to the mere discrimination of his own independent organs, and, still more, as in the artificial state of things, in which he lives, his senses are at once perplexed and palled, by the variety and confusion of luxurious preparation, it is not easy to say, how far his primary instincts,—*if it had not been the high and inevitable dignity of his nature to rise above these*, —might, *of themselves*, have operated as directors. But, whatever their *primary* influence may be, the *secondary* influence of his organs of taste and smell is not the less important. When we have once completely learned what substances are noxious, and what are salutary, we then, however *similar* they may be in their *other* sensible qualities, discriminate these as often as they are again presented to us, by that

taste or *smell*, which they affect with different sensations; and our *acquired knowledge* has thus *ultimately*, in guiding our choice, the *force* and the *vivacity* of an *original instinct*.

HEARING.

IN considering the phenomena of the sense of *hearing*, to which I now proceed, I may apply to them the same remark, which has been already applied to the phenomena of the senses before considered. They are classed by us, as *sensations*, merely in consequence of our previous belief in the existence of those external bodies, the motion of which we have known to be followed by similar feelings. Our mind begins suddenly to exist *in a certain state*; and we call this state *joy* or *sorrow*, without supposing that it depends on the immediate presence of any external object. It begins again to exist, in a different state, and we say, that we *hear a flute*, referring the feeling immediately to an external cause. But there can be no doubt, that, in making this reference, in the one case, and not in the other, we are influenced by experience, and by *experience alone*. If we suppose ourselves endowed with the single sense of hearing, *and incapable therefore of having previously seen or felt the flute, which is breathed before us*, or any other extended and resisting object whatever, we may imagine the mere sound to recur, innumerable times, without discovering any mode by which it can give us *more* knowledge, than we should receive from a similar recurrence of any internal joy or sorrow. That we should

be able to refer it to a body, such as we now mean, when we speak of a flute, is manifestly impossible; since this implies knowledge of *solidity*, and *form*, and *colour*, which could not be acquired without *touch* and *sight*. But there seems even no reason to think, that we should refer it to any external cause whatever, unless, indeed, such a reference necessarily accompanied *every* feeling, which we know is far from being the case, since we have many *internal pleasures*, not more like to each other, than they are to the sound of a flute, which we do not refer to any thing, separate or separable, from the constitution of our own mind. In *hearing*, therefore, as in *taste* and *smell*, we do not derive from its sensations our knowledge of things external, but, *in consequence of our knowledge of things external*, we regard these feelings, as *sensations*, in the common philosophic meaning of that term.

Simple as our sense of hearing may seem, it affords a striking specimen of that almost infinite *variety*, which is not inconsistent with the *closest resemblance*; and the notion which we may form of the innumerable varieties of sound, is perhaps not more *vast*, when we attempt to wander over its boundless discrepancies, than when we limit ourselves to its greatest similarities, in a single *word* of a language, or, in that which we might be inclined at first to regard as simplicity itself, a single *musical tone*.

"A flute, a violin, a hautboy, and a French horn," it has been truly remarked, "may all sound the same tone, and be easily distinguishable. Nay, if twenty *human voices* sound the same note, and

with equal strength, there will still be some difference. The *same voice*, while it *retains its proper distinctions*, may be varied many ways, by sickness or health, youth or age, leanness or fatness, good or bad humour. The *same words*, spoken by foreigners and natives, nay, by different provinces of the same nation, may be very easily distinguished."*

When we speak of the value of this sense as a part of our mental constitution, it is enough to say, that it is to *it* we are indirectly indebted for the use of verbal *language*,—that power so peculiarly *distinctive of man*, that, in the poetical phraseology of one celebrated country, it gave him his name as a *divider of the voice*, or, in other words, an utterer of articulate sounds. If we consider speech simply as a medium of the reciprocal expression of present feelings to the little society of citizens and friends of which we are a part, even in this *limited* view, of what inestimable value does it appear! To communicate to every one around us, in a single moment, the happiness which we feel ourselves,—to express the want, which, we have full confidence, will be relieved as soon as it is known,—or to have the still greater privilege of being ourselves the ministers of comfort to wants, which otherwise could not have been relieved by us, because they could not have been discovered,—when the heart which we love is weighed down with imaginary grief, to have it in our power, by a few simple sounds, to convert anguish itself into rapture,—these are surely no slight

* Reid's Inquiry into the Human Mind, c. iv. sect. 1.

advantages; and yet, compared with the benefit which it affords to man as an *intellectual being*, even these are inconsiderable. To be *without language*, spoken or written, is almost to be *without thought*; and if, not an individual only, living among his fellows whose light may be reflected upon *him*, but our *whole race* had been so constituted, it is scarcely possible to conceive that beings, whose instincts are so much less various and powerful than those of the other animals, could have held over them that dominion, which they now so easily exercise. Wherever two human beings, therefore, are to be found, *there* language is. We must not think, in a speculative comparison of this sort, of mere savage life; for the rudest savages would be as much superior to a race of beings without speech, as the most civilized nations at this moment are, compared with the half-brutal wanderers of forests and desarts, whose ferocious ignorance seems to know little more than how to *destroy* and be *destroyed*. Even these are still associated in tribes, that concert together verbally their schemes of havock and defence; and employ, in deliberating on the massacre of beings *as little human as themselves*, or the plunder of a few huts, that seem to contain nothing but *misery and the miserable*, the same glorious instrument with which Socrates brought wisdom down from heaven to earth, and Newton made the heavens themselves, and all the wonders which they contain, *descend*, as it were, to be *grasped* and *measured* by the *feeble arm of man*.

Such are the benefits of language, even in its fu-

gitive state; but the noblest of all the benefits which it confers, is in that *permanent* transmission of thought, which gives to *each individual* the powers and the wisdom of his *species;* or, rather,—for the united powers and wisdom of his species, as they exist in myriads, at the same moment with himself, upon the globe, would be comparatively a trifling endowment,—it gives him the rich inheritance of the accumulated acquisitions of all the multitudes, who, like himself, in every preceding age, have *inquired,* and *meditated,* and *patiently discovered,* or, by the happy inspiration of genius, have *found* truths which they scarcely *sought,* and penetrated, with the rapidity of a single glance, those depths of nature, which the weak steps and dim torch-light of generations after generations had vainly laboured to explore. By that happy invention, which we owe indirectly to the ear, the boundaries of time seem to be at once removed. Nothing is *past;* for every thing lives, as it were, before us. The thoughts of beings who had trod the most distant soil, in the most distant period, arise again in *our* mind, with the same *warmth* and *freshness* as when they first awoke to life in the bosom of their author. That system of perpetual transmigration,—which was but a fable, as believed by Pythagoras,—becomes *reality* when it is applied, not to the *soul* itself, but to *its feelings.* There is then a *true metempsychosis,* by which the poet and the sage, in spreading their conceptions and emotions from breast to breast, may be said to *extend their existence* through an ever-changing immortality. Who does not feel the just-

ness of what Lucan says, when he speaks of the events of Pharsalia, and predicts the lively feelings with which they are afterwards to be regarded, not as *past*, and therefore indifferent, but as present, and *almost future*:

> " Hæc et apud seras gentes, populosque nepotum,
> Sive suâ tantum venient in secula famâ,—
> Sive aliquid magnis nostri quoque cura laboris
> Nominibus prodesse potest,—cum bella legentur,
> Spesque metusque simul, perituraque vota movebunt:
> Attonitique omnes, veluti *venientia* fata
> Non *transmissa* legent, et *adhuc* tibi magni favebunt." *

" There is without all doubt," as has been justly observed, " a chain of the thoughts of human kind, from the origin of the world down to the moment at which we exist,—a chain not less universal than that of the generation of every being that lives. Ages have exerted their influence on ages; nations on nations; truths on errors; errors on truths." In conformity with this idea of the generation of thought, I may remark, that we are in possession of opinions, —which, perhaps, regulate our life in its most important moral concerns, or in all its intellectual pursuits,—with respect to which, we are as ignorant of the original authors, by whom they have been silently and imperceptibly transmitted to us from mind to mind, as we are ignorant of *those* ancestors, on whose existence in the thousands of years which preceded our entrance into the world, our life itself

* Pharsalia, lib. vii. v. 207—213.

has depended, and without whom, therefore, *we* should not have been.

The unlimited transmission of thought, which the invention of language allows, brings the *universe of mind* into that point of view, in which an eloquent living French author has considered the *physical universe*,—as exhibiting, *at once*, all its splendid *varieties* of events, and uniting, as it were, *in a single moment*, the wonders of *eternity*. "Combine," says he, "by your imagination, all the fairest appearances of things. Suppose that you see, at once, all the hours of the day, and all the seasons of the year,—a morning of spring and of autumn,—a night brilliant with stars, and a night obscure with clouds,—meadows, enamelled with flowers,—fields, waving with harvest,—woods, heavy with the frosts of winter,—you will then have a just notion of the spectacle of the universe. Is it not wondrous, that while *you* are admiring the sun, who is plunging beneath the vault of the west, *another* observer is beholding him as he quits the regions of the east,—in the same instant reposing, weary, from the dust of the evening, and awaking, fresh and youthful, in the dews of morn! There is not a moment of the day, in which the same sun is not rising, shining in his zenith, and setting on the world! or, rather, our senses abuse us, and there is no rising, nor setting, nor zenith, nor east, nor west; but all is one fixed point, at which every species of light is beaming at once from the unalterable orb of day."

In like manner,—if I may venture to consider the phenomena of the mind in the same fanciful point

of view,—every moment may be said to be exhibiting the birth, and progress, and decay of thought. Infancy, maturity, old age, death, are mingled, as it were, in one universal scene. The opinions which are perishing in one mind, are rising in another; and often, perhaps, at the last fading ray of the flame of genius, that may have almost dazzled the world with excess of brilliancy, some star may be kindling, which is to shine upon the intellectual universe with equal light and glory:—

> "Flowers of the sky! ye, too, to age must yield,
> Frail, as your silken sisters of the field!
> Star after star from Heaven's high arch shall rush;
> Suns sink on suns, and systems systems crush:
> Headlong, extinct, to one dark centre fall,
> And Death, and Night, and Chaos, mingle all!
> ——Till, o'er the wreck, emerging from the storm,
> Immortal Nature lifts her changeful form;
> Mounts from her funeral pyre on wings of flame,
> And soars, and shines,—another, and the same." *

Such are the benefits resulting from that happiest of all inventions, which we may be said to owe to our sense of Hearing,—if, indeed, it *be* an *invention* of man, and not rather, as many have thought, a *coeval power*, bestowed on him by his provident Creator at the very moment which gave him life. But still, whether original or invented, the *ear must equally* have been its *primary recipient*. We have seen, in the view which we have taken of it, that of our more social intercourse it constitutes the chief

* Darwin's Botanic Garden, Canto IV. v. 371—380.

delight,—giving happiness to hours, the wearying heaviness of which must otherwise have rendered existence an insupportable burthen; and that, in its more important character, as *fixed*, in the imperishable records which are transmitted, in uninterrupted progression, from the generation which passes away to the generation that succeeds, it gives to the individual *man*, the product of all the creative energies of *mankind*; extending, even to the humblest intellect, which can still mix itself with the illustrious dead, that privilege, which has been poetically allotted to the immortality of genius, of being "the citizen of every country, and the contemporary of every age."

LECTURE XXI.

ON HEARING—CONTINUED.

GENTLEMEN, after considering, in a former Lecture, some *states of mind*, which arise *immediately* from *affections of our nerves*, and which, therefore, I can see no reason for classing apart from our other *sensations*, I proceeded, in my last Lecture, to consider the *feelings*, which are *more commonly* termed sensations, beginning with the most *simple* of these, in the order of *smell*, *taste*, and *hearing*.

In the elucidation of these, my great object was to show, that there is nothing, in the mere states of mind, that constitute the sensations of *fragrance*, *sweetness*, *sound*, which could have led us to ascribe *them* to corporeal *objects* as their *causes*,—more than in any of our internal *joys* or *sorrows*,—*if* we had had no other means of acquiring knowledge of those causes, than are afforded by the sensations themselves,—that, in short, we consider them as *sensations*, or *external affections* of the mind, because we have *previously* believed in an external world,—

not that we believe in an *external world*, merely because we have had those particular sensations.

The various *advantages*, which these three senses afford, I endeavoured to point out to you; and, in particular, occupied a great part of my Lecture, in illustrating the advantages for which we are indebted to our *organ of hearing*, as the medium of *language*, and by it, more or less directly, not of the high acquisitions of science and civilization only, but of the rudest forms of social communication, and almost of social existence.

After the remarks on this advantage received from *language*,—which is unquestionably, and beyond all comparison, *the most inestimable* benefit which the sense of hearing affords,—it would be improper to omit wholly the mention of the pleasure, which we receive from it, as a source of *musical delight*,—of that *expression of feeling*, which itself, almost like verbal discourse, may be said to be a *language*, since it is the utterance of thought and emotion from heart to heart,—but which has a voice, as independent of the mere arbitrary *forms of speech*, as the tears of gratitude, or the smiles of love, that may, indeed, give eloquence to *words*, but require no *words* to render *them* eloquent. Though, when *very* strictly considered, even the pure, and almost spiritual delight of music, may perhaps be counted only a *pleasure of sense*, it yet approaches, by so many striking analogies, to the nature of our *intellectual* enjoyments, that it may almost be said to belong to *that class*; and though,—relatively to minds that are

capable of enjoyments more truly intellectual,—it is to be considered as a mere pastime or relaxation, it assumes a far higher character, in its relation to the *general pleasures of common minds*, and may be said, at least, to be the *intellectual luxury* of those, who are incapable of any *other luxury, that deserves so honourable a name*. And it is well, that there should be some *intermediate* pleasure of this sort, to withdraw for a while the dull and the sensual, from the grosser existence in which they may be sunk, and to give them some *glimpses*, at least, of a state of *purer* enjoyment, than that which is to be derived from the sordid gains, and sordid luxuries, of *common* life.

Of the influence,—whether salutary or injurious, —which music has upon the general character,— —when cultivated, to great refinement, and so universally as almost to become a part of the habit of daily social life,—it is not, at present, the place to speak. But of its *temporary* influence, as a source of tranquillizing *delight*, there can be no doubt,— nor, perhaps too, of its occasional efficacy, in exciting emotions of a stronger kind, when peculiar circumstances may have predisposed to them in a very high degree. But there can be as little doubt, that by far the greater number of anecdotes of this kind, which have been handed down in ancient history, are as fabulous, as the existence of that *god of music*, to whose *miraculous influence alone*, they could, with any decent appearance of epic or dramatic truth, have been ascribed.

"Hear, how Timotheus' varied lays surprise,
And bid alternate passions fall and rise;
While, at each change, the son of Lybian Jove
Now burns with glory, and then melts with love,
Now his fierce eyes with sparkling fury glow,
Now, sighs steal out, and tears begin to flow;
Persians and Greeks like turns of nature found,
And the *world's victor* stood *subdued*—by sound!"*

On these lines, which allude to the celebrated ode of Dryden,—who adapted, with most happy application, to the burning of the Persian palace, an anecdote recorded of the power of Timotheus over the same great warrior, on another occasion,—I may remark, by the way, what influence the *accidental composition* of this *ode* has had, in giving almost a sort of *dignity* to the very madness of the act which it records. It is impossible for us,—even though we knew well how fictitious is the circumstance attached to it,—not to look upon the action, in a *different* light, from that in which we should have viewed it, if we had read only the historical account of it, as originating in a *drunken debauch*, at the instigation of a drunken prostitute.

Such is the influence of genius. Its power extends not over the *present* and the *future merely*, but, in some measure, also over the *past*, which might have seemed fixed for ever. In spite of our conviction, we look upon an action of Alexander differently, because an individual existed, many centuries after him, and in a country which would then

* Pope's Essay on Criticism, v. 374—381.

have been justly counted *barbarous*, by the *very barbarians whom he overcame.*

"Ebrio scorto de tanta re ferente sententiam, unus et alter, et ipsi mero onerati, assentiunt: Rex quoque fuit avidior quam patientior. "*Quin igitur ulcisimur Græciam, et urbi faces subdimus?*" Omnes incaluerant mero; itaque surgunt *temulenti* ad incendendam *urbem*, cui *armati*, pepercerant." *

Of the wonders, which were said, in ancient times, to have been performed, on the mind and body, by a judicious *adaptation* of musical sounds, to the nature of the particular case, *intellectual, moral,* or *corporeal,* I might read many histories to you, from the original authors, which would perhaps not be less truly ludicrous *in the serious gravity of their narration,* than in the affected solemnity of the fictitious personage whose speech I am about to quote. The experiment with which the quotation closes is, it must be allowed, a very *powerful* one, and certainly *could not have been more successful,* in the hands of Timotheus himself.

"The bare mention of *music* threw Cornelius into a passion. 'How can you dignify,' quoth he, 'this modern fiddling with the name of music? Will any of your best hautboys encounter a wolf now-a-days with no other arms but their instruments, as did that ancient piper Pythocaris? Have ever wild boars, elephants, deer, dolphins, whales, or turbots, shewed the least emotion at the most elaborate strains of your modern scrapers, all which have been, as it

* Quintus Curtius, lib. v. cap. 7.

were, tamed and humanized by ancient musicians? Whence proceeds the degeneracy of our morals? Is it not from the loss of ancient music, by which (says Aristotle) they taught all the virtues? Else might we turn Newgate into a college of Dorian musicians, who should teach moral virtues to those people. Whence comes it that our present diseases are so stubborn? whence is it that I daily deplore my sciatical pains? Alas! because we have lost their true cure, by the melody of the pipe. All this was well known to the ancients, as Theophrastus assures us, (whence Cælius calls it *loca dolentia decantare*) only indeed some small remains of this skill are preserved in the cure of the Tarantula. Did not Pythagoras stop a company of drunken bullies from storming a civil house, by changing the strain of the pipe to the sober spondæus? and yet your modern musicians want art to defend their windows from common nickers. It is well known that when the Lacedæmonian mob were up, they commonly sent for a Lesbian musician to appease them, and they immediately grew calm as soon as they heard Terpander sing: Yet I don't believe that the Pope's whole band of music, though the best of this age, could keep his holiness's image from being burnt on a fifth of November.' 'Nor would Terpander himself,' replied Albertus, 'at Billingsgate, nor Timotheus at Hockley in the Hole, have any manner of effect, nor both of them together bring Horneck to common civility.' 'That's a gross mistake,' said Cornelius, very warmly 'and to prove it so, I have here a small lyra of my own, framed, strung, and tuned after the ancient manner. I can play some frag-

ments of Lesbian tunes, and I wish I were to try them upon the most passionate creatures alive.'— "'You never had a better opportunity,' says Albertus,' 'for yonder are two apple-women scolding, and just ready to uncoif one another.' With that Cornelius, undressed as he was, jumps out into his balcony, his lyra in hand, in his slippers,—with a stocking upon his head, and waistcoat of murrey-coloured satin upon his body: He touched his lyra with a very unusual sort of an harpegiatura, nor were his hopes frustrated. The odd equipage, the uncouth instrument, the strangeness of the man and of the music, drew the ears and eyes of the whole mob that were got about the two female champions, and at last of the combatants themselves. They all approached the balcony, in as close attention as Orpheus's first audience of cattle, or that of an Italian opera, when some favourite air is just awakened. This sudden effect of his music encouraged him mightily, and it was observed he never touched his lyre in such a truly chromatic and enharmonic manner as upon that occasion. The mob laughed, sung, jumped, danced, and used many odd gestures, all which he judged to be caused by the various strains and modulations. 'Mark,' quoth he, 'in this, the power of the Ionian, in that, you see the effect of the Æolian.' But in a little time they began to grow riotous, and threw stones: Cornelius then withdrew. 'Brother,' said he, 'do you observe I have mixed unawares too much of the Phrygian? I might change it to the Lydian, and soften their riotous tempers: But it is enough: learn from this sample

to speak with veneration of ancient music. If this lyre in my unskilful hands can perform such wonders, what must it not have done in those of a Timotheus or a Terpander?' Having said this, he retired with the utmost exultation in himself, and contempt of his brother; and, it is said, behaved that night with such unusual haughtiness to his family, that they all had reason to wish for some ancient Tibicen to calm his temper."

That, in enlightened countries, so many wonders should have been related, *and credited*,—if *no* phenomena that could justify them were truly observed,—may perhaps, on first reflection, appear so *unaccountable*, as almost to induce belief of the wonders themselves, as *less inexplicable* than the very credit which was given to them. But it must be remembered, that, in all ages, and even in countries of philosophers, there is a very large fund of credulity in man,—which yields, very readily, to every thing that is not *absolutely impossible*, and which is even not very nice, in estimating what *is* impossible, —leaning always, whenever there is the slightest doubt on this point, with a very favourable inclination to the side of the *possibility*;—and, in the second place, that the phenomena of music are precisely of a kind, which gives this credulity the widest scope. They are *pleasing in themselves*, and of a kind therefore, on which it is gratifying to the imagination to dwell—their influence on the mind is felt in a very high and wonderful degree, even

* Mart. Scrib. Book I. c. 7. with some exclusions.

without any fabulous addition;—they are produced by instruments, which seem, in their sensible appearance, so little adequate to the production of them, that the result is almost like the effect of supernatural agency, to which we know not how to give any limits;—and, when *a little mystery* is once admitted, the imagination, which has fairly got over the difficulty of this first admission, is not very scrupulous *afterwards* as to *degrees*, but is sufficiently ready of itself to admit a great deal more, without pausing to consider its *exact amount*.

The phenomena of music, in addition to their general interest, are truly worthy, in another respect, of our astonishment, from that striking diversity of organic power in the perception of *melody* and still more of *harmony* which they exhibit in different individuals, in whom all other circumstances are apparently the same,—a diversity which has often attracted the attention of philosophers, and has led even those who have no great tendency to speculation of any kind, to *wonder* at least, which is the first step of all philosophizing. In the present instance, however, unfortunately, this first step is the only step which philosophers have been able to take. They have been obliged to desist, after all their efforts to proceed further, and to submit to share, and even to acknowledge that they share, the ignorance of the vulgar. If, indeed, the want of *musical ear* had involved either a general defect of hearing, or a general slowness of discrimination in other cases of nice diversity, the wonder would not have been great. But those, who are without ear for music,

perceive, as readily as others, the faintest whisper; —they distinguish, like them, the faintest shades of difference in the mere articulations of sound which constitute the varieties of language, nor the articulations only, but the differences also of the mere tones of affection or displeasure, grief or gaiety, which are so strikingly analogous to the varied expression of musical *feeling*;—and their *power of discrimination* in every other case, in which the judgment can be exercised, is *not less perfect.* Nay, —to increase still more the difficulty,—they are often as sensible, as others, of the beauty of series of tones of a different kind; and some of our best poets and declaimers,—who of course must have had a quick discernment of *metrical rhythm,* and of the *melody of elocution,*—have yet been incapable of distinguishing the *musical* relations of sounds, as reciprocally high or low,—the melody that results from them in certain successions, and the harmony or the discord of their union. That it depends, chiefly, or perhaps entirely, on the structure or state of the mere corporeal organ of hearing,—which is of a kind, it must be remembered, peculiarly complicated, and therefore susceptible of great original diversity in the parts, and relations of the parts that form it, is very probable; though the difference of the separate parts themselves, or of their relations to each other, may, to the mere eye, be so minute, as never to be discovered by dissection,—thus leaving, to every future race of inquirers, the same difficulty which has perplexed ourselves, and the same impossibility of overcoming it. In the sense of *vi-*

sion, I may remark, there is a species of defect, very analogous to *the want of musical ear*,—a defect, which consists in the difficulty, or rather the incapacity, of distinguishing *some colours* from each other—and colours which, to general observers, seem of a very opposite kind. As the want of musical ear implies no general defect of mere quickness of hearing, this visual defect, in like manner, is to be found in persons, who are yet capable of distinguishing, with perfect accuracy, the form, and the *greater or less brilliancy of the coloured object*;—and I may remark too, in confirmation of the opinion, that the want of musical ear depends on causes not *mental* but *organic*; that, in this analogous case, some attempts, not absolutely unsuccessful, have been made, to explain the apparent confusion of colours, by certain peculiarities of the external organ of sight. Though the one case, however, were to throw no light upon the other, it is still gratifying to philosophers, to have a case at all analogous, to which, when they are weary of considering what has baffled all their endeavours to explain it, they may have the comfort of turning away their attention, without the mortification of seeming absolutely to *fly* from the subject. Such is the strange constitution of our nature, that *merely to have another difficulty presented to us*, though it may yet be *absolutely unsurmountable in itself*,—*if* only it have some slight resemblance to a former difficulty,—seems to us almost as if we had succeeded in explaining the first;—and each difficulty, by a very convenient transposition, which our pride knows

well how to make, supplies, according as we may have been considering the *one* rather than the *other*, the place of *explanation* to that which is afterwards to explain *it*, no less clearly, in its turn.

In considering sound relatively to its external cause, we give the name of *vibration* to the successive *pulses*, or alternate *approaches* and *recessions* of the particles of the elastic sounding body; and the word is a very convenient one for *expressing this series*. But still it may be necessary to warn you, that the word, though *single*, is not the less expressive of a *plurality of states*, which have no other unity, than as they are comprehended in this single word,—a word, like many other single words, by which we express the combination of various objects, or invented by us, merely to aid our weakness, that is incapable, *without such helps*, of *conceiving* or remembering even a small part of that wide series of physical changes, which we are able to discover in the universe, if each event of the series were to be distinguished by a peculiar name. This mere *aid of our weakness*, however, we are apt, by a very absurd, but a very general fallacy, to consider as something, much more dignified in its nature than a mere arbitrary verbal abbreviation,—as truly an explanation of the very phenomena, or series of phenomena, which it simply designates. You must not flatter yourselves, however, that you have advanced the *slightest step*, in *explaining* the connexion of sound with the *pulses* of air, when you have merely invented a brief term for those successive pulses, and ascribed the sound to *vibration*; you have, indeed,

given a name to a series of corpuscular phenomena, but you have not discovered any thing additional to the phenomena themselves, which can be considered as explanatory to the changes produced.

What, then, is truly *meant*, when it is said, that, for producing the mental affection, which constitutes *hearing*, *some previous vibration* is necessary? It certainly cannot mean, as I have already remarked, that the *vibration* is anything in itself different from the *series of physical events* which it expresses, however few or numerous these may be, since it is only the name which we give to them, when we consider them together; nor can it mean that the *direct* cause of the *sensation* is anything different from the *one organic state immediately preceding* the sensation,—a state which may, indeed, have resulted from a long sequence of prior *organic* states, produced during the continued vibratory motion of the air, but which is itself, in its relation to the phenomenon which succeeds it,—that affection of the sentient mind which constitutes *hearing*,—to be considered *independently of these prior states*, that have no other relation to the mind, than as gradually inducing that ultimate organic state, which is the state that is followed by sensation. There is a *part*, less or greater, of the *sensorial organ*, which *must* be affected, *in a certain manner*, *before* the sensation of hearing can take place; and, in *vibration*, there is nothing but *a repeated approach and secession of the vibrating particles*. If *vibration*, then, or a series of pulses, be necessary, it is evident that a corresponding *series of changes* in the organ is necessary; that

is to say, there is no one instant, at which the vibrating particles are in such a state relatively to the sensorial organ, that if no previous change had been excited in the organ itself, they could have produced in it *immediately*, the precise state, which is instantly followed by the mental affection of *hearing*. There must, therefore, be a *series of changes*, in the *sensorial organ itself*, the last of which only is followed by sensation. The particles of the air, or any other elastic medium, for example, must, in their *first* appulse, produce a *certain state* of the sensorial organ; in their *second* appulse, a *different state*, by acting on an organ, *already affected in a certain manner;* in their *third* appulse, a still different state; and thus successively, till, *at last*, they produce *that particular definite state of the sensorial organ*, in consequence of which, the *mind* becomes instantly *sentient*,—a state which could not have been produced by any single *impulse* of the particles on the unaffected organ, because then *vibration*, or a *series of pulses*, would *not* have been *necessary*.

To this successive modification of states of an organ, terminating in a particular *result*, different from each *of the prior states*, there are abundant analogies in the *history of the mind*, and many in the phenomena of sensation itself. One of the most remarkable of these is the production of the *sensation of whiteness*, by the rapid revolution of a cylinder, on which the *separate prismatic colours*, and the separate colours only, are painted, in certain proportions; *each colour*, in this case, acting on the organ already affected by a former colour, till a sensation

altogether different from the result of each of them when separate, is their *joint ultimate result*, the sensation of *whiteness*, without any external object that is *white*.

In *this way only*, by a series of progressive organic affections, and not by any single affection, can the *vibration* of an elastic medium, as different from one simple unrepeated impulse, terminate in the production of sound. It is, in short, a name for *this series of changes*, and nothing more.

If, in a case so very obscure as that of *musical ear*, in which all that is *truly evident* is, that in different individuals, there is a diversity of *some kind or other*—I could permit myself to indulge any conjecture *with respect to this diversity*,—I might, perhaps, be inclined to look to the view now given of the real nature of *vibration*, and its progressive effects on the auditory part of our nervous system, as furnishing some slight ground, not, indeed, for any *theory*, which is far too presumptuous a word, but for the *preference* of one *mere possibility*, to other *mere possibilities*, which is all that can be hoped in any conjecture, on so very *dim* and *impalpable* a subject.

We have seen that the series of pulses of the vibrating air,—*if vibration*, or a *series of pulses be necessary to sound*,—must produce a series of changes in the sensorial organ, which produce no corresponding affection of the mind, *till, at last*, a state of the organ is produced, which *is* attended with sensation. This, and this only, can be meant, when we speak of vibration as the antecedent of sound,—a series of

organic changes, and, after this series, an affection of the mind. In such circumstances, it is certainly more probable, that the organ thus affected with a series of progressive changes, does not pass *instantly* from the greatest change, to the state in which it was originally, *before the first pulse*, but that it retains this state, for a time, however short, or, at least, passes through some series of states, in its gradual return, so that, if a *new* vibration be excited by the pulse of any sounding body, before the organ of hearing have returned to its original state, the effect may be supposed to be different from that which it would have been, if the same vibration had been primarily communicated to the organ, in its state of rest, or in that state, which, from our want of a better word, may be termed its state of *rest*.

The phenomena most analogous to these vibratory affections of the ear, as depending on successive impulses, are unquestionably the phenomena of *titillation*, or rather, to express what is so familiar and simple, by a more homely and appropriate word, the phenomena of *tickling*. In this, the great circumstance distinguishing musical feeling, is to be found, that the feeling arises *not from the separate impressions*, but from their *successions* or *co-existence*. When the palm of the hand is gently tickled, as the finger passes rapidly and repeatedly over the palm, the parts first affected are *again* affected with various degrees of pressure, as the ear, in melody, is successively affected by repeated varieties of vibration; and various parts of the organ of touch exist, at *the same moment*, in *various states*, forming one

joint result of sensation, as, in *harmony*, various vibrations of the organ of hearing *co-exist*, and blend together in one mingled delight. To produce tickling, a certain rapidity of succession is necessary; for, if the parts, *first affected*, have *returned* to their original state, before *other parts* begin to be affected, or *themselves* to be *affected again*, the slow motion, it is evident, may be continued, for any length of time, without any effect, *different from that of simple pressure*. The quicker, then, the *return* of the parts may be to their *original state*, the *less* will be the *titillation*; and, it is very probably, a difference in this quickness of return, which constitutes the difference of *ticklishness*, so remarkable in different individuals, who feel, equally, the light pressure of *each separate* touch. That there is a difference of ticklishness, in different persons, you all know; some being easily excited even to convulsive laughter, by slight motions, that scarcely produce any effect in others, beyond that of the simple primary sensation of touch. A person who is ticklish, and a person who is not ticklish, agree in receiving this first tactual sensation; but they differ afterwards, in this respect, that when the same slight impulse is rapidly repeated, on the same surface, it produces a livelier effect than before, in the *one*, but not in the *other*. The organ of the one who is not ticklish is in the same state, or nearly in the same state, when it receives the second, third, and fourth impression, as when it received the first, and no peculiar excitement, therefore, is produced. The organ of the other, more susceptible, or more tenacious of the affection

produced, has not returned to its original state, when the rapid impression is repeated, and is, therefore, at every new impression, affected in a different manner.

Proceeding on the analogy of these phenomena,—of mere *tickling*, with which I may suppose you to be all acquainted,—an analogy which, striking as it is in many circumstances, I readily own, does not justify *more* than *conjecture* in the case to which I would apply it,—I conceive it to be, at least, *not absolutely impossible*, since a diversity of *some* kind there must be, that in those who receive no pleasure from music, as in those who are not ticklish, there is a rapid return of the nervous organ, after each separate affection, to its *original state*; that each separate touch or pressure in the one case, and each separate tone in the other case, produces its *particular effect*,—that effect which it would have produced in all, if unaccompanied by any other tone in music, or slight pressure in tickling,—but that a *succession* of these produces no effect different from that which each would have produced singly. A certain interval is necessary for distinct hearing in every case; and, before this interval has passed, the auditory nerves, in this case, may be imagined to be again *quiescent*, or nearly quiescent.

I need not add, that, in an inquiry of this sort, all which is necessary, is to account for the *mere original defect of pleasure*; since, if the relations of notes, as reciprocally *high* or *low*, *never gave any delight*, the ear, having no object of interest in these successions, would soon habitually neglect them, and

at length cease altogether to distinguish them, attending only to the *verbal meaning* of sounds, and not to their *tone;* in the same manner, as we pay little attention to another relative difference of voices as more or less loud, unless when the difference is *very* considerable, and not in those common differences of intensity which distinguish every voice in conversation from every other voice,—or as, after living long in a province, the dialect of which is distinguished by any accentual peculiarities, we at last become unconscious of these, and hear the words, as it were, stripped of their peculiarity of tone. In what is termed the cultivation of a musical ear, however, we have not an analogy merely, but a direct proof of this influence of habit. That the ear *may* be *improved* by *cultivation,* or, in other words, by nice attention to the differences of musical sound, every one knows; and if this attention can enable us, even in mature life, to distinguish sounds *as different in themselves,* which, but for the habitual attention, we should have regarded as the *same,* it may well be supposed, that *continued inattention, from earliest infancy,* may render us insensible of musical relations still more obvious and precise, than those which we have thus only *learned* to distinguish; or, which is the same thing, that continued *attention* from infancy to slight musical differences of sound,—an attention which may be regarded as the natural effect of pleasure received,—may render us capable of distinguishing tones as *very dissimilar,* the differences of which, however obvious at present, we should scarcely, but for such original attentive dis-

crimination, have been able to detect. What, in comparison, the refined musical ear of a performer,—almost every hour, and every moment, of whose life has been spent amid sounds,

> "Untwisting all the chains, that tie
> The hidden soul of harmony,"—

is to a common musical ear, that common musical ear may be to those in whom this discriminating skill seems to be wholly or nearly defective. The refined musician,—who, but for the long practice of his art, would have shared that incapacity which now excites his wonder,—is astonished, that persons of common ear do not distinguish the nice differences which appear to him almost as remarkable as those differences which they *are* capable of perceiving; and the person of common musical ear only does the same thing, when he is astonished that the less refined differences, remarked by himself, are not obviously distinguishable by all mankind, or, at least, by all who have no deafness to incapacitate them from hearing the separate sounds. The discrimination in both has depended on previous attention, which has necessarily been greater in one case than in the other; and what attention can we suppose to have been originally given, if, from the cause which I have ventured to state as a possible one in persons without musical ear, no pleasure had originally been felt by them in any sequence of notes as successive, and the whole value of sound been to them the meaning of which it was symbolically re-

presentative, which, accordingly, they have learned to discriminate in every case, as accurately as others.

I might follow out this speculation at much greater length; but I have already dwelt too long on what is at best a conjecture, and what, perhaps, even as a mere conjecture, is founded only on a slight analogy.

After the examination of the phenomena of *Smell*, *Taste*, and *Hearing*, which are peculiarly simple, I proceed to the consideration of Senses, which afford phenomena that are more complicated, or, at least, which seem more complicated, as considered in the *mature state of the mind;* when the sensations that arise from *one* set of organs, by frequent coexistence with sensations that arise from affections of *other* sets of organs, are, as it were, *blended* with them in *one compound perception*, and so *permanently* modified for ever after, that it is difficult in all cases, and in many cases perhaps impossible, to form any accurate notion of the sensations *as they existed in their original elementary state.*

Since, of the two senses of *Sight* and *Touch*, that of *Sight*,—as far, at least, as we are able, by intellectual analysis at present, to discover its original sensations,—is more simple, and more analogous to the senses before considered, I should be inclined, on these accounts, to proceed to the consideration of it, previously to any inquiry into the sense of Touch. But this order, though unquestionably the more regular, if we had to consider only the *original* sensations of each organ, would be attended with great

inconvenience in considering their *subsequent modified* sensations; since those of Vision depend, in a very great degree, on the *prior* affections of *Touch*, with the nature of which, therefore, it is necessary for you to be acquainted in the first place. I am aware, indeed, that, in considering even *Touch*, I may sometimes find it necessary to refer, for illustration, to the phenomena of *Vision*, though these have not been considered by us, and must, therefore, for the time, be taken upon trust. But when phenomena are at all complicated, such occasional *anticipations* are absolutely unavoidable. Sensation, indeed, says Aristotle, is a *straight line*, while intellect is a *circle*,—Αἴσθησις γραμμὴ, νοῦς κύκλος,—or, to use the paraphrastic translation of Cudworth, in his treatise on Immutable Morality, "Sense is of that which is without. Sense wholly gazes and gads abroad; and, therefore, doth not know and comprehend its object, because it is different from it. Sense is a line, the mind is a circle. Sense is like a line, which is the flux of a point running out from itself; but intellect like a circle, that keeps within itself."* That *sense* is not a circle is, indeed, true, since it terminates in a point; but, far from being a *straight* line, it is one of the most perplexing of *curves*, and is crossed and cut by so many other curves,—into many of which it flows, and unites with them completely,—that when we arrive at the extremity of the line, it is almost impossible for us to determine with accuracy *what curve it is*, which, in the strange

* Page 98, 99.

confusion of our diagram, we have been attempting to trace from its initial point.

I proceed, then, to the consideration of the phenomena of the sense of

Touch.

If priority of sensation alone were to be regarded, the sense of *touch* might deserve to be considered in the first place; as it must have been exercised long before birth, and is probably the very feeling with which sentient life commences. The act of *birth*, in relation to the mind of the little stranger, who is thus painfully ushered into the wide scene of the world, is a series of feelings of this class; and the first feeling which awaits him, on his entrance,—in the change of temperature to which he is exposed,—is still to be referred to the same organ. It is at this most important moment of existence, when one dark and solitary life of *months*, of which no vestige is afterwards to remain in the memory, is finished, and a new life of *many years*,—a life of sunshine and society,—is just beginning, that, in the figurative language of the author, whom I am about to quote to you, *Pain*, the companion of human life, receives him on the first step of his journey, and *embraces* him in his *iron arms*.

"Primas tactus agit partes, primusque minutæ
Laxat iter cæcum turbæ, recipitque ruentem.

Non idem huic modus est qui fratribus; amplius ille
Imperium affectat senior, penitusque medullis,
Visceribusque habitat totis, pellîsque recentem
Funditur in telam, et latè per stamina vivit.
Necdum etiam matris puer eluctatus ab alvo
Multiplices solvit tunicas, et vincula rupit;
Sopitus molli somno, tepidoque liquore
Circumfusus adhuc; tactus tamen aura lacessit
Jamdudum levior sensus, animamque reclusit.
Idque magis, simul ac solitum blandamque calorem
Frigore mutavit cœli, quod verberat acri
Impete inassuetos artus: tum sævior adstat,
Humanæque comes vitæ Dolor excipit; ille
Cunctantem frustrà et tremulo multa ore querentem
Corripit invadens, ferreisque amplectitur ulnis."*

It is at this moment, so painful to himself, that he is affording to *another* bosom, perhaps the purest delight of which our nature is capable, and has already kindled, in a heart, of the existence of which he is as ignorant, as of the love which he excites in it, that warmth of affection, which is never, but in the grave, to be cold to *him*, and to which, in the many miseries that may await him,—in sorrow, in sickness, in poverty,—and perhaps, too, in the penitence of guilt itself,—when there is no other eye, to whose kindness he can venture to look, he is still to turn with the confidence, that he has yet, even on earth, *one friend*, who will not abandon him,—and who will still think of that innocent being, whose eye, before it was conscious of light, seemed to look to her for the love and protection, *which were ready to receive him.*

* Gray de Princip. Cogit. lib. i. v. 64.—80.

LECTURE XXII.

ON THE FEELINGS ASCRIBED TO THE SENSE OF TOUCH, —AND ANALYSIS OF THESE FEELINGS.

In my last Lecture, Gentlemen, I finished the remarks which I had to offer, on *our sense of hearing;* and, in the conclusion of it, had begun the consideration of a very important order of our feelings, those which belong to the *sense of touch.*

Of these, I may mention, in the first place, the sensations of *heat and cold,*—sensations that arise from affections of our nerves of touch, or at least from affections of nerves, which, as equally diffused and intermingled with them,—it is impossible to distinguish from those which constitute our organ of touch, the same wide surface rendering us sensible, as it were, at every point, of warmth as of pressure.

I have also remarked to you, how little analogy there is of our sensations of warmth, to the other sensations commonly *ascribed* to this organ; and the great difference of the feelings, has led some physiologists to believe, that the organs of sensations so different, must themselves be different.

But, even though the sensations were as dissimilar as is supposed, there is no reason *a priori* to believe,—and to *experience*, it is evident, that, in this case, we cannot appeal, so as to derive from *it* any ground for believing,—that sensations, which are very different, must arise from affections of different organs. As far, indeed, as we can safely appeal to experience, in this very case, there are sensations which we never hesitate in referring to our tactual nerves, as different from the more common sensations ascribed to touch, as the sensation of warmth itself. I allude to the pain of puncture or laceration of the skin. Indeed, if the brain be ultimately the great organ of all our sensations, it is evident that we must refer to affections of *one* sensorial organ, not the various feelings of touch only, but, with them, the still greater variety of feelings, that constitute our sensations of smell, taste, sound, and colour.

But are we indeed sure, that there truly is that great dissimilarity supposed, or may not our belief of it arise from our reference to touch of sensations that truly do not belong to it? Such, at least, is the opinion, to which, I think, a nicer analysis will lead us. The *primary* original feelings, which we owe to our mere organ of touch, I consider as of a kind, *all* of which are far more analogous to the sensations of warmth, or of pain on puncture, than to the perceptions of *form* and *hardness*, which are generally regarded as *tangible*. Before entering on the analysis, however, it will be necessary to consider, what are the sensations which we are *supposed* to owe to this organ.

The *sensations* of *heat* and *cold*,—as received from our organ of touch,—we may almost lay out of account in our analytical inquiry. It is unnecessary to dwell on them, or even to repeat, in application to *them*, the argument, which has been already applied more than once to the sensations before considered. It is quite evident, that, in classing our *warmth* or *chillness*, as a *sensation*,—and not as a feeling that has arisen spontaneously in the mind,—we are influenced by that *experience*, which has *previously* given us the belief of *objects external*,—at least, of our own corporeal frame,—and that, if we had been unsusceptible of *any other sensations*, than those of *heat* and *cold*, we should as little have believed these to arise directly from a *corporeal cause*, as any of our feelings of *joy* or *sorrow*. The same remark may be applied to the painful sensations of puncture and laceration.

It is only to the *other* more important information ascribed to the sense of touch, therefore, that our attention is to be directed.

By *touch*, we are commonly said to be made acquainted with *extension, magnitude, divisibility, figure, motion, solidity, liquidity, viscidity, hardness, softness, roughness, smoothness.* These *terms*, I readily allow, are very convenient for expressing *notions* of certain forms or states of bodies, that are easily distinguishable. But, though specifically distinguishable, they admit generically of very considerable reduction and simplification. Hardness and softness, for example, are expressive only of greater

or less resistance,—roughness is *irregularity* of resistance, when there are intervals between the points that resist, or when some of these points project beyond others,—smoothness is complete uniformity of resistance,—liquidity, viscidity, are expressive of certain degrees of yieldingness to our effort, which solidity excludes, unless when the effort employed is violent. All, in short, I repeat, are only different species or degrees of that which we term *resistance*, whatever it may be, which impedes our continued effort, and impedes it *variously*, as the substances without are themselves various. Such is one order, then, of the feelings commonly ascribed to the sense which we are at present considering.

To proceed to the other supposed tangible qualities, before included in our enumeration,—*figure* is the boundary of *extension*, as *magnitude* is that which it comprehends; and *divisibility*, if we consider the apparent continuity of the parts which we divide, is only *extension* under another name. If we except *motion*, therefore, which is not permanent, but accidental,—and the knowledge of which is evidently *secondary* to the knowledge which we acquire of our organs of sense, before which the objects are said to *move*,—and secondary in a much more important sense, as resulting not from any direct immediate organic state of one particular moment, but from a comparison of sensations past and present,—all the information, which we are supposed to receive primarily and directly from touch, relates to modifications of *resistance* and *extension*.

Though it is to the sense of *touch*, however, that the origin of the knowledge of these is generally ascribed, I am inclined to think, in opposition to this opinion, that, in both cases, the reference is wrongly made,—that if we had the sense of touch *only*, we should not be sensible of *resistance*, nor, I conceive, even of *extension*,—and that we seem to perceive the varieties of *extension* and *resistance* immediately by *touch* only, because the simple original tactual feeling has become representative of these, in the same manner, and for the same reason, as we seem to perceive the varieties of *distance immediately* by the *eye*. The sense of touch has unquestionably, like all our other senses, its own peculiar feelings, though, for the simple original feelings, attached to *the affections of this most extensive of organs*, we have unfortunately no name, but that which is applied in popular, and even in philosophic language, to *all* the affections of the mind. Our *joy* or *grief*, *hope* or *fear*, *love* or *hate*, I before remarked, we term *feelings*, as readily and frequently, as we use this term to express our sensations of *touch*; and that, which, however restricted in its original meaning, is *now* the *common name* of our *mental affections of every class*, has, by this extension, unfortunately, become a very unfit one, for distinguishing a *limited order* of those affections.

Whatever be the term which we may use, however, there *is*, and *must be*, a sensation *peculiar to touch, without regard to the extent or quantity of the surface impressed*,—as there is, in colour, a sen-

sation peculiar to vision, *without regard to the extent of the portion of the retina on which the light may have fallen.* Every physical point of our *organ of touch,* when existing in a certain state, is capable of inducing in the mind a peculiar feeling, *though no other physical point of the organ were affected,*—as every physical point of the *retina, though but a single ray of light were admitted to the eye,* is capable of inducing in the mind a peculiar affection of vision; and when many such physical points are affected together, by some impressing surface, the form of which we think that we discover immediately by touch, it is from experience only that we can learn the vicinity of the physical points of our own tactual surface thus impressed, and consequently the continued extension of the object which impresses them. Before we have so much knowledge of external things, as to know even that we have any bodily organs whatever,—and it is of this state of absolute ignorance alone that we must think, as often as we speculate on the information which our senses separately afford,—when we know as little of our bodily frame, as of that material universe, of which we know nothing, we cannot, by the very terms of this supposition, know that different points of our organ of touch are affected in a certain manner—that these points are contiguous to each other—and that the mass affecting these contiguous points must consequently itself be composed of points, that are, in like manner, contiguous. We know nothing of our organs—we know nothing of any external masses—

but a certain feeling is excited in our mind; and it is this simple feeling alone, whatever it may be, which constitutes the direct elementary sensation of touch, though this simple elementary sensation, like many other sensations, may afterwards be so blended with other feelings, as to become significant of them, and even to seem to involve them, as if originally and necessarily coexisting.

It is impossible for us *at present*, indeed, to have a body impressed on us, without the immediate notion of *something external and extended*,—as it is impossible for one, whose sight is perfect, to open his eyes, in the light of day, without perceiving, *as it were immediately*, the *long line* of variegated landscape, in the scenery before him:—the one impossibility is exactly equal to the other;—yet we know, in the case of vision, that all which we immediately perceive, at the very moment, when our eyes seem to comprehend the worlds of *half infinity*, in the hemisphere on which we gaze, is a small expanse of light,—*if even*, which I greatly doubt, there truly be, in our *original* perceptions of this sense, so much of extension, as is implied in the smallest possible expanse. In *touch*, in like manner, I conceive, that the *immediate sensation*, though, like *colour*, it may now seem *inseparable* from *extension* and *outness*,—if, on the authority of Berkeley, I may venture to use that barbarous but *expressive* term,—was, like colour, originally distinct from them,—that, by the mere original sensations of this organ, in short, we could as little know the existence of an impressing body, as, by the mere original sensations of vision,

we could learn that such a body existed at the extremity of the room in which we sit.

In defining *sensation*, when we began our inquiry into its nature, I stated it to be *that affection of the mind, which is immediately subsequent to the affection of certain organs, induced by the action of external bodies*; and I admitted, that, in this definition, two assumptions were made,—the existence of foreign *changeable external* bodies, as *separate from the mind*,—and the existence of *organs*, also separate from the mind, and in relation to *it* truly *external*, like other bodies, but forming a permanent part of our corporeal frame, and capable of being affected, in a certain manner, by the *other* bodies, of which the existence was assumed. As far as our analytical inquiry has yet proceeded, these assumptions are assumptions still. We have not been able to detect, in the sensations considered by us, more than in any of our internal pleasures or pains, any circumstances that seem to be indicative of a material world without.

Our analytical inquiry itself, however, even in attempting to trace the circumstances, in which the belief originates, *must* proceed on that very belief. Accordingly, in examining our senses of *smell*, *taste*, and *hearing*, I uniformly took for granted the existence of *odoriferous*, *sapid*, and *vibrating bodies*, and considered merely, whether the sensations, excited by *these*, were, of themselves, capable of communicating to us any knowledge of the *external and independent existence of the bodies which excited them*.

In the present stage of our inquiry, I must, in like manner, take for granted the existence of bodies, which act, by their contiguity or pressure, on our organ of *touch*, as the odoriferous or sapid particles, act on our nerves of smell and taste—not that I assume this belief, as *existing in the mind whose intellectual acquisitions are the subject of inquiry*,—for, in that case, the inquiry itself would be superfluous. I assume it, merely as existing in the mind of *us* the *inquirers*,—and only, because it is impossible, without such an assumption, to make the *suppositions that are necessary for the inquiry*. All our language is at present adapted to *a system of external things*. There is no direct *vocabulary of scepticism*; and even the most cautious and philosophic inquirer, therefore, must often be obliged to express his *doubt*, or his *dissent*, in language that implies *affirmation*. In the present case, when we attempt to analyze our sensations, it is impossible to speak of the *circumstances in which the infant is placed*, or, I may say even, to speak of the *infant himself*, without that assumption which we have been obliged to make. The *real existence* of an external universe, and the *belief of that existence*, are, however, in themselves, perfectly separate and distinct; and it is not the existence of an external world, which we are now endeavouring to establish as *an object of belief*. We are only endeavouring, in our analysis of the sensations afforded by our different organs, to ascertain in what circumstance the belief arises. There might be a world of suns and planets, though there were no human being, whose

mind could be affected with belief of it; and even the most zealous defenders of the reality of external nature must admit, that, though no created thing but ourselves were in existence, our mind might still have been so constituted, as to have the *very series of feelings*, which form at present its successive phenomena, and which are ascribed in no small number to the action of external things.

Are the *primary* sensations derived from the organ of touch, then, of such a kind as to afford us that knowledge, which they are supposed to give of things without?

Let us imagine a being, endowed with *the sense of touch*, and with every other sense and faculty of our mind, but *not* with any previous knowledge of his own *corporeal* frame, or of other *things external*,—and let us suppose a small body, of any shape, to be pressed, *for the first time*, on his open hand. Whatever feelings mere touch can give, directly of itself, would of course be the same in this case, as *now*, when our knowledge is increased, and complicated, from many other sources.

Let the body, thus impressed, be supposed to be a small *cube*, of the *same* temperature with the *hand* itself, that all consideration of *heat* or *cold* may be excluded, and the feeling produced be as *simple* as possible.

What, then, may we suppose the consequent feeling to be?

It will, I conceive, be a simple feeling of the kind of which I have already spoken, as capable of arising from the affection of a single point of our organ of

touch,—a feeling that varies indeed with the quantity of pressure, as the sensation of fragrance varies with the number of the odorous particles, but *involves* as little the notion of *extension*, as that notion is involved in the mere fragrance of a violet or a rose: The connection of this original tactual feeling, however, with that of extension, is, *now*, so indissoluble, as, indeed, it could not fail to become, in the circumstance in which it has uniformly arisen, that it is almost impossible to conceive it as *separate*. We may perhaps, however, make a near approach to the conception of it, by using the *gentle gradual pressure* of a *small-pointed body*, which, in the various *slight feelings*, excited by it,—before it penetrate the cuticle, or cause any considerable pain,—may represent, in some measure, the simple and immediate effect, which pressure in any case produces,—exclusively of the associate feelings which it indirectly suggests.

Such of you, as have the curiosity to try the experiment, with any small bodies, not absolutely pointed,—such as the *head* of a pin, or any body of similar dimensions,—will be astonished to feel, how *very slightly*, if *at all*, the notion of *extension or figure* is involved in the feeling, *even after all the intimate associations of our experience*;—certainly *far less* than the notion of longitudinal distance seems to us to be involved in the immediate affections of our sense of sight. It is an experiment, therefore, which I must request you not to neglect to make.

But the pressure of such a large body, as the

cube, which we have supposed to be pressed against our organ of touch, *now* awakens very different feelings. We perceive, as it were immediately, *form* and *hardness*. May not, then, the knowledge of *resistance* and *extension*, and consequently the belief of the essential qualities of *matter*,—be originally communicated by the affections of this organ?

The feeling of *resistance*,—to begin with this,—is, I conceive, to be ascribed, not to our *organ of touch*, but to our *muscular frame*, to which I have already more than once directed your attention, as forming a *distinct organ of sense*; the affections of which, particularly as existing in combination with other feelings, and modifying our judgments concerning these, (as in the case of distant vision, for example,) are not less important than those of our other sensitive organs. The sensations of this class, are, indeed, in common circumstances, so *obscure*, as to be scarcely heeded or remembered by us; but there is probably no contraction, even of a single muscle, which is not attended with some faint degree of sensation, that distinguishes it from the contractions of *other muscles*, or from *other degrees of contraction* of the same muscle. I must not be understood, however, as meaning that we are able, in this manner, by a sort of *instinctive anatomy*, to perceive and number our own muscles, and when many of them are acting together, as they usually do, to distinguish *each* from *each*; for, till we study the internal structure of our frame, we scarcely know more, than that we have *limbs* which move *at our will*, and we are altogether ignorant of the compli-

cated *machinery* which is subservient to the volition. But each motion of the visible *limb*, whether produced by *one* or *more* of the invisible *muscles*, is accompanied with a *certain feeling*, that may be *complex*, indeed, as arising from various muscles, but which is considered by the mind as *one*; and it is this *particular feeling*, accompanying the particular *visible motion*,—whether the feeling and the invisible parts contracted be truly simple or compound,—which we distinguish from every *other feeling* accompanying every other *quantity of contraction*. It is as if a man, born blind, were to walk, for the first time, in a flower garden. He would distinguish the fragrance of one parterre from the fragrance of another, though he might be altogether ignorant of the separate odours united in each; and might even consider as one simple perfume, what was, in truth, the mingled product of a thousand.

Obscure as our muscular sensations are in common circumstances, there are other circumstances,—which I pointed out to you in treating before of this subject,—in which they make themselves abundantly manifest. I need not refer to the *diseased state* of the muscles, in which they become *painfully* sensible; and I will admit, that the reference to such a morbid state, in which the structure may be supposed to be altered by the disease, would perhaps scarcely be a fair one. It is sufficient to refer to phenomena of which every one must have been conscious innumerable times, and which imply no *disease* nor *lasting* difference of state. What is the feeling of *fatigue*, for example, but a muscular feeling? that

is to say, a feeling of which our muscles are as truly the organ, as our eye or ear is the organ of sight or hearing. When a limb has been *long* exercised, without sufficient intervals of rest, the repetition of the contraction of its muscles is accompanied, not with a *slight and obscure sensation*, but with one which amounts, if it be gradually increased, to *severe pain*, and which, before it arrives at this, has passed progressively through *various stages of uneasiness*. Even when there has been no previous fatigue, we cannot make a single powerful effort, at any time, without being sensible of the muscular feeling connected with this effort. Of the pleasure which attends more moderate exercise, every one must have been conscious in himself, even in his years of maturity, when he seldom has recourse to it for the *pleasure alone;* and must remember, still more, the happiness which it afforded him in other years, when happiness was of less costly and laborious production than at present. By that admirable provision, with which nature accommodates the blessings which she gives, to the wants that stand in need of them, she has, in that early period,—when the pleasure of *mental freedom*, and the *ambitions* of *busy life*, are necessarily excluded,—made ample amends to the little *slave of affection*, in that disposition to spontaneous pleasure, which renders it almost an *effort* to be *sad*, as if *existence* itself were *delight;* giving him a fund of independent happiness in the very air which she has poured around him, and the *ready limbs* which move through it, almost without his bidding. In that beautiful passage, in which Goldsmith describes

the sounds that come, in one mingled murmur, from the village, who does not feel the force of the happiness which is comprized in the single line, that speaks of

"The playful children, *just let loose* from school." *

It is not the mere *freedom from the intellectual task* of which we think; it is, much more, that *burst of animal pleasure*, which is felt in every limb, when the long constraint that has repressed it is removed, and the whole frame is given once more to all the freedom of nature. It is by the *pleasure of exertion*, and the *pain of inexertion*, that we are roused from that *indolence*, into which, with great injury to society, that requires our contribution of active aid, we otherwise might sink;—as we are roused, in like manner, by the *pleasure of food*, and the *pain of hunger*, to take the aliment that is necessary for our individual sustenance; and though the *mere aliment* is, indeed, more important for *life*, it is not more important for *happiness* than that pleasure of activity which calls and forces us from our slothful repose.

"Thee, too, my Paridel,—I saw thee there,
Stretch'd on the rack of a too easy chair."

With the same happy provision with which she has considered the young of our own species, Nature has, in the other animals, whose sources of general pleasure are still more limited than in the child, converted their muscular frame into an organ of de-

* Deserted Village, v. 120.

light. It is not in search of richer pasture that the horse gallops over his field, or the goat leaps from rock to rock; it is for the luxury of the exercise itself. "If the shell-fish on the shore," says Dr Ferguson, "perform no visible action but that of opening and closing his shell, to receive the brine that accommodates, or to exclude the foul matter that annoys him, there are other animals that, in the opposite extreme, are *active;* and for whom Nature seems to administer the means of supply, *merely as a restorative of that strength* which they are so freely to *waste* in the seemingly *sportive or violent exercises to which they are disposed.*" *

"The bounding fawn, that darts across the glade,
When none pursues, through mere delight of heart,
And spirits buoyant, with excess of glee;
The horse as wanton, and almost as fleet,
That skims the spacious meadow at full speed,
Then stops, and snorts, and, throwing high his heels,
Starts to the voluntary race again;
The very kine, that gambol at high noon,—
The total herd,—receiving first from one,
That leads the dance, a summons to be gay;
Though wild their strange vagaries, and uncouth
Their efforts, yet resolved, with one consent,
To give such act and utterance as they may
To ecstacy, too big to be suppress'd." †

It is this appearance of *happy life* which spreads a charm over every little group, with which Nature

* Principles of Moral and Political Science, Part I. c. i. sect. i.

† Cowper's Task, Book IV.

animates her scenery; and he who can look without interest on the young lamb, as it frolics around the bush, may gaze, indeed, on the magnificent landscape as it opens before him,—but it will be with an eye which looks languidly, and in vain, for pleasure which it cannot find.

These observations, on our muscular pains and pleasures, in conformity with that view of them which I endeavoured to give you, in a former lecture, are not digressive *now*, nor uselessly repeated. It is of great importance for the applications which we have to make, that you should be fully aware that our muscular frame, is not merely a part of the living *machinery of motion*, but is also *truly an organ of sense*. When I move my arm, without resistance, I am conscious of a *certain feeling*; when the motion is *impeded*, by the presence of an *external body*, I am conscious of a *different* feeling, arising partly, indeed, from the mere sense of touch, in the moving limb *compressed*, but not consisting *merely* in this compression, since, when the *same pressure* is made by a foreign force, *without any muscular effort on my part*, my *general feeling is very different*. It is the feeling of this resistance to our progressive effort, (combined, perhaps, with the mere tactual feeling) which forms what we term, our feeling of *solidity* or *hardness*; and, without it, the tactual feeling would be nothing more, than a sensation *indifferent* or *agreeable*, or *disagreeable* or *severely painful*, according to the force of the pressure, in the particular case; in the same way, as the *matter of heat*, acting, in different degrees, on this very *organ*

of touch, and on different portions of its surface, at different times, produces all the *intermediate sensations, agreeable, disagreeable,* or *indifferent,* from the pain of *excessive cold,* to the *pain of burning;* and produces them, *in like manner, without* suggesting the presence of any *solid body, external to ourselves.*

Were the *cube,* therefore, in the case supposed, pressed, *for the first time,* on the hand, it would excite *a certain sensation, indeed,* but not that of *resistance,* which always implies a muscular effort that is resisted, and consequently not that of *hardness,* which is a mode of *resistance.* It would be very different, however, if we fairly made the attempt to *press against it;* for, *then,* our effort would be *impeded,* and the *consequent feeling of resistance would arise;* which, as co-existing in this case, and in every case of effort, with the particular sensation of touch, might *afterwards* be *suggested* by it, *on the simple recurrence of the same sensation of touch,* so as to excite the notion of *hardness, in the body touched,* without the *renewal of any muscular effort on our part,* in the same manner as the *angular surfaces of the cube,* if we chance to turn our eye on it, are suggested by the mere *plane* of *colour,* which it presents to our immediate vision, and which is all that our immediate vision would, of itself, have made known to us. The feeling of resistance, then, I trust, it will be admitted, and consequently of hardness, and all the other modes of resistance, is a muscular, not a tactual feeling.

But, though the *resistance* or *hardness* of the cube,

as implying some *counter effort*, may not be *immediately sensible* to our superficial organ of touch, are not its *dimensions* so perceived? Its *cubical* form, it will be allowed, cannot be felt, as only one of its surfaces is supposed to be pressed upon the hand; but, is not at least this *square surface* perceived immediately? In short, does not *touch, originally* and *immediately*, convey to us the knowledge of *extension*?

With our present complete belief of external things, indeed, and especially of our organs of sense, the most important of these, the origin of our knowledge of extension, seems to us a matter of very easy explanation. The *square surface* presses on our *organ of touch*,—it affects not a *single physical point merely*, but a portion of the organ, corresponding exactly, in surface with itself; and the perception of the similar *square*, it will be said, thus immediately arises. But, in all this easy explanation, it is very strangely forgotten, that the *feeling*, whatever it may be, which the impression of the square surface produces, is not *itself the square configuration of our tactual organ, corresponding with that surface*, but the state of a very different *substance*, which is as little square, as it is round or *elliptical*,—which is, indeed, from its own *absolute simplicity, incapable* of resemblance in shape to any thing; and the resemblance of which, therefore, to the shape of the *mere organ*, is as little to be expected in the sensations of touch,—as *that other state of mind*, which constitutes the *sensation* of the *fragrance* of a rose, can be expected to resemble the shape of the *odorous particles themselves*, or of the *organ* of *smell*, which

is affected by them. The very knowledge which touch is supposed to give, is, in this case, most inconsistently, assumed, as existing in the mind, before the very touch which is supposed to give it. If, indeed, the mind could *know*, that a part of its external corporeal organ *is compressed into the form of a square*, or that *another square surface is compressing that organ*, the difficulty would be at an end; for it would, *then*, most undoubtedly, have that very *knowledge of extension*, the origin of which we seek. But it is not explained, *how* the mind, which alone can have sensation or knowledge, and which certainly is not square itself, is to be made *acquainted* with the *squareness* of its *own corporeal organ*, or of the *foreign body*; nor, indeed, how the *squareness of the mere external organ* should produce this particular *affection of the mind*, more than if the organ were compressed into the *shape of a polygon of one thousand sides*.

Let it be supposed, that, when a small cube is pressed on the hand, one hundred physical points of the organ of touch are affected in a certain manner. We have, it is said, an immediate perception of a square surface. Let it next be supposed, that, instead of one hundred of these *continuous* points of the organ, an equal number of points, at various distances in the surface of the body, are affected in the same manner. On this supposition, it will scarcely be said, that the perception of a square would arise, when there is no square, more than any other imaginable form, in the space comprehended in the pressure. Yet what difference is there, in these two

cases, to a mind that is, by supposition, absolutely ignorant of every bodily organ, and consequently alike ignorant of the nearness or distance of the points of the organ of touch? In both cases, one hundred points, equally sensible, are affected, and are affected precisely in the same manner;—and there is truly no difference, unless we tacitly suppose the mind to be conscious of the bodily frame, and, therefore, of the continuity of certain points of the organ of touch, with the other points that are proximate to them,—a sort of knowledge, for which it would not be easy to account, and which it is impossible to conceive, without conceding the very point in question. A little attentive reflection on the circumstances of these two cases, will, perhaps, aid you in freeing your minds from the illusive belief, of which it may not be easy for you at first to divest yourselves,—that the continuity and similarity of shape, which are known to *us* the inquirers, are known also to that little sentient being, whose first elements of knowledge we are endeavouring to trace.

We are too apt to forget, in inquiries of this sort, that it is not in our organ of *touch merely*, that a certain extent of the nervous extremity of our sensorial organ is affected. This occurs, *equally, in every other organ.* In the superficial expansion of the nerves of *hearing, smell, taste,* for example, it is not a *point* merely that is affected, but *a number of continuous points*, precisely, as in the superficial organ of touch; and if, therefore, the notion of *extension* in general, or of *figure*, which is *limited extension,* arose whenever a part of the nervous expansion was

affected in any way, we should derive these notions as much from a *taste*, or a *smell*, or a *sound*, as from any of the configurations or affections of our organ of touch.

It is not, therefore, merely because *a certain limited part of the sensorial organ* is affected, that we have the notion of the *square surface*, in the case supposed by us: for, if *this alone were necessary*, we should have *square inches*, and *half inches*, and various other forms, rectilinear or curvilinear, of *fragrance* and *sound*.

But, it may perhaps be urged, though *all* our organs must, indeed, exist equally with our organ of touch *of a certain shape* when affected,—and though the sensorial figure of our *other* organs, is *not* accompanied with any of those mental affections, which constitute the perception of angular or curvilinear figure, there is something, in *the nature of that part of the sensorial organ, which terminates on the general surface of the body*, that impresses the mind, *immediately*, with a sensation, corresponding with the *exact figure*, in which the organ may itself exist. When the *square*, therefore, in the case imagined by us, is *impressed* upon the *organ*, the mental affection which constitutes our notion of a square may immediately arise, though it would not arise from the similar squareness of our organs of smell or hearing.

In answer to this *mere supposition*, I may remark, that the sensorial organ of *touch* exists, at *every moment*, of a *certain shape*, and that we yet have no perception of this shape, so as to be able to delineate

the whole extent of our *tactual* organ, in the same manner as we could delineate the *impressing square*, in the case supposed: or, if it be said, that the configuration of the organ does not excite this mental affection, in the quiescent state of the part, but only *when it is itself affected*, I may remark, that we are as little able *to delineate its figure*, when we are exposed to the action of *heat*, which yet *acts most powerfully* upon this very organ, inducing sensations, at least as vivid as those of hardness or figure.

It may still, however, be contended, for in a question of this sort I wish fairly to imagine every possible argument—it may still be contended, that, though the organ of touch has no effect, in this way, *merely as configured*, and might, *in any other configuration*, operate, *precisely in the same manner*, on the sentient mind,—still, the harmony of the bodily and mental changes is so arranged by nature, that the organic state in touch, *whatever it may be*, is immediately followed by the knowledge of the extension of the impressing body,—in the same manner as a certain state of the organ of *smell*, *whatever that state may be*, is immediately followed by that affection of the mind, which constitutes our sensation of the fragrance of a rose. Though this argument, in truth, rather *begs* the question, than attempts to *meet* it, let us give to it all the force which it may *claim*. The accurate determination of the point may, indeed, seem, at first, almost impossible; since, in whatever manner the seeming perception may arise, it must be admitted, that we now seem to perceive extension, *as it were immediately*, by

touch; though not more immediately than in vision we seem to perceive the positions of objects in different distances before our eyes.—But there is, fortunately, at least *one test*, which the point in question still admits. *If* the apparent perception of extension by touch, be truly and originally *immediate*, and not *acquired*, like the apparent perception of *distance* in vision, so as to involve a sort of intellectual measurement or suggestion of some sort, after the primary sensation,—the perception must be *constant* and *universal*,—not confined to a *few* simple and familiar forms, which, if we can distinguish *these alone*, we may be supposed to have learned from experience, *but extending to forms of every kind*; for it would certainly be a very strange abuse of the *licence of supposition*, to imagine, that we perceive a *square immediately*, but not a *circle*, or a *circle* but not a *square*, or indeed *any other figure*. Even at present, then—though the circumstances of the trial,—when the *experience* of many years must have *exhausted so many varieties of form*, associating the notion of these with the particular tactual feeling *whatever that may be*—are surely very unfavourable to the opinion which I maintain,—*even at present*, I may safely trust to *experiment*, the determination of the question. When a body, *which we do not see*, is pressed on any part of our tactual organ, *do* we immediately *discover its form*,—*as immediately*, as we are sensible of *fragrance*, when our organ of smell is in a healthy state, and an odoriferous body is presented to it, or of *sound*, when a cannon is fired beside

us? This we certainly should do, if figure were as direct an object of the sense of touch, as fragrance and sound are of the senses of smell and hearing. Even though it be a form of the simplest kind, *square, round, triangular,* that is thus pressed upon our palm, we scarcely distinguish the precise species of *figure* for a moment, and are long before we can convince ourselves, that we have perceived its *exact magnitude,* in the determination of which, after all, we shall very probably be mistaken, if we confine ourselves to the mere *intellectual measurement;* though we should even add to the immediate sensation of touch, all the *discriminating skill* of our *judgment* and *reflection.* But, if the body be *irregular in form,*—however slight the irregularity may be, and of a species that would not perplex in the slightest degree our *sense of sight,* and which certainly, therefore, should perplex as little our sense of touch, which is supposed to be still more immediately perceptive of form,—we are incapable for some time, *and I may even say are incapable altogether,* of fixing, *with precision,* its magnitude and figure—that very magnitude and figure which are yet said to be the direct objects of touch. Of this a single trial may convince any one; it is a trial which, as it seems to *me decisive,* I must request you to make. Are we then entitled to say, in the case of the square surface of the cube pressed upon our hand, that though we cannot discover *other* forms and magnitudes, we yet discover *its* extension, and consequently *its* figure, by the immediate sense of touch?—or may we not rather con-

clude with confidence, that what is true of other forms is true of *this* also, that it is only in consequence of more frequent experience we have *learned* as it were to distinguish, with *some* degree of certainty, the simpler forms, which, as mere forms, are not more direct objects of the sense of touch than forms the most irregular, and that without such experience, therefore, our *mere sense of touch* is incapable of informing us of the figure of bodies, *immediately*, and *originally*.

If then the knowledge of extension be *not* derived from our *immediate sense of touch*, it must be derived from some other source, which allows it to be *associated with the feelings of touch*, and *afterwards suggested by these*, in the same manner as *distant extent*, in the case of vision, is suggested by a *few slight varieties of colour*. Let us endeavour, then, *since some such source there must be*, to discover *what the source is*.

LECTURE XXIII.

ANALYSIS OF THE FEELINGS USUALLY ASCRIBED TO THE SENSE OF TOUCH, CONTINUED.

My last Lecture, Gentlemen, was employed in considering the information *which we receive from the sense of touch*, or rather the information *which we are commonly supposed* to receive from that sense,—but which, in a great part at least, I am inclined to ascribe to another source.

The qualities of bodies, supposed to be made known to us by touch, I reduced to *two*, of which all—whatever be the variety of names that express them,—are mere *varieties*, RESISTANCE and EXTENSION:—*solidity*, *liquidity*, *viscidity*, *hardness*, *softness*, *roughness*, *smoothness*, being *modes of* RESISTANCE, and nothing more;—*figure*, *magnitude*, *divisibility*, as evidently nothing more than modes of EXTENSION: and I stated reasons, which induce me to believe, that neither our feeling of *resistance* nor that of *extension*, has its direct origin in the *sense of touch*; though the *original simple feeling*, which this organ affords, is *now*, from constant association, almost indiscriminately combined with both, in some one or other of their varieties.

The first of these classes,—that which includes the various modifications of *resistance*,—I examined at great length, and showed, I trust, that it is not to *our organ of touch* we are indebted for these, but that they are feelings of *another sense*, of which our *muscular frame* is the organ,—the feelings, in short, of which every one must have been conscious, who has attempted to *grasp* any body, or to *press* against it, when the full contraction of the muscles must, of course, have been impeded. According as the body is *hard* or *soft*, *rough* or *smooth*,—that is to say, according as it *resists*, in various degrees, the progress of our effort of contraction,—the muscular *feeling*, which *arises from the variously impeded effort, will vary in proportion*; and we call *hard*, *soft*, *rough*, *smooth*, that which produces one or other of the varieties of these muscular feelings of *resistance*, —as we term *sweet* or *bitter*, *blue* or *yellow*, that which produces either of these sensations of *taste* or *vision*. With the feeling of *resistance*, there is, indeed, in every case, *combined*, a certain tactual feeling, because we *must touch* whatever we attempt to grasp; but it is not of this mere tactual feeling we think, when we term bodies hard or soft,—it is of the greater or less resistance which they afford to our muscular contraction.

I next proceeded to consider the *other class* of supposed tangible qualities, which includes the various modifications of *extension*, and urged many arguments to show, in like manner, that,—however indissolubly these may *seem* at present to be connected with the simple feelings of our organ of touch,

—it is not to our *simple original feelings* of this sense, that we owe our knowledge of them, as qualities of things without.

Though the notion of *extension*, however, may arise in the manner which I have supposed, this, it may be said, is *not* the notion of *external existence*. To what, then, are we to ascribe the belief of *external reality*, which *now* accompanies our sensations of touch? It appears to me to depend on the feeling of *resistance*,—the organ of which, as a muscular feeling, I before explained to you, which breaking in, without any known cause of difference, on an accustomed series, and *combining* with the notion of *extension*, and consequently of *divisibility*, *previously acquired*, furnishes the elements of that compound notion, which we term the notion of *matter*. *Extension, resistance*;—to combine these *simple notions* in something which is not ourselves, and to have the *notion* of *matter*, are precisely the same thing; as it is the same thing to have combined the head and neck of a man with the body and legs of a horse, and to have the notion of that fabulous being, which the ancients denominated a *centaur*. It certainly, at least, would not be easy for any one to define *matter* more simply, than as *that which has parts*, and *that which resists our effort to grasp it*; and, in our analysis of the feelings of infancy, we have been able to discover how both these notions may have arisen in the mind, and arisen too, in circumstances, which must lead to the combination of them in one complex notion.

The infant stretches out his arm for the first time, by that volition without a known object, which is either a mere instinct, or very near akin to one,—this motion is accompanied with a certain feeling,—he repeats the volition which moves his arm fifty or one thousand times, and the same progress of feeling takes place during the muscular action. In this repeated progress, he feels the truth of that intuitive proposition, which, in the whole course of the life that awaits him, is to be the *source* of all his *expectations*, and the *guide* of all his *actions*,—the simple proposition, that *what has been* as an antecedent, will be followed by *what has been* as a consequent. At length he stretches out his arm *again*, and, instead of the accustomed progression, there arises, in the resistance of some object opposed to him, a feeling of a very different kind, which, if he persevere in his voluntary effort, increases gradually to severe pain, before he has half completed the usual progress. There is a difference, therefore, which we may, without any absurdity, suppose to *astonish* the *little reasoner*; for the expectation of *similar consequents*, from *similar antecedents*, is observable even in his earliest actions, and is probably the result of an original law of mind, as universal, as that which renders certain sensations of sight and sound the immediate result of certain affections of our eye or ear. To any being, who is thus impressed with belief of similarities of sequence, a different *consequent* necessarily implies a difference of the *antecedent*. In the case at present supposed, however, the infant, who as yet knows nothing but himself, is conscious

of no *previous* difference; and the feeling of *resistance* seems to him, therefore, something *unknown*, which has its *cause in something that is not himself.*

I am aware, that the application to an infant, of a process of reasoning expressed in terms of such grave and formal philosophic nomenclature, has some chance of appearing ridiculous. But the *reasoning* itself is very different from the *terms* employed to express it, and is truly as simple and natural, as the terms, which our language obliges us to employ in expressing it, are abstract and artificial. The infant, however, in his feeling of similarity of antecedents and consequents, and of the necessity, therefore, of a new antecedent, where the consequent is difficult, has the *reasoning*, but not the *terms*. He does not *form* the *proposition* as *universal*, and applicable to cases that have not yet existed; but he *feels* it, in every particular case, as it occurs. That he does truly reason, with at least as much subtilty, as is involved in the process now supposed, cannot be doubted by those who attend to the manifest results of his little inductions, in those acquisitions of knowledge, which show themselves in the actions, and, I may say, almost in the very looks of the little reasoner,—at a period long before that, to which his own remembrance is afterwards to extend, when, in the maturer progress of his intellectual powers, the darkness of *eternity* will meet his eye alike, whether he attempt to gaze on the *past*, or on the *future*; and the wish to know the events, with which he is afterwards to be *occupied* and *interested*, will not be more *unavailing*, than the wish to *retrace events*,

that were the occupation and interest of the most important years of his existence.

Then,

> "So—when the mother, bending o'er his charms,
> Clasps her fair nurseling in delighted arms;—
> With sparkling eye the blameless plunderer owns
> Her soft embraces and endearing tones,
> Seeks the salubrious fount with opening lips,
> *Spreads his inquiring hands*, and smiles, and sips." *

Even then, many a process of ratiocination is going on, which might have served as an example of *strict logic* to Aristotle himself, and which affords results, far more valuable to the individual reasoner, than all the contents of all the folios of the crowd of that great logician's scholastic commentators.

That the notions of *extension* and *external resistance*, which are thus supposed to be acquired from the progressive contraction of muscles, and the difficulty opposed to their accustomed contraction, which introduces suddenly a new feeling, when all the antecedent feelings had been the same, should be directly combined, *only* with the sensations of *touch*, cannot appear wonderful, when we reflect, that it is only in the case of touch, there is that frequent *coexistence* or immediate *succession*, which is necessary to the subsequent union. In the case of the acquired perceptions of vision, it might, in like manner, be asked, why is it that we do not *smell* the exact distance of a *rose*, as we *see* its exact *dis-*

* Darwin's Botanic Garden, Canto III. v. 353—4, and 357—360.

tance, as soon as we have turned our eye on the bush on which the rose is growing? And the only answer which can be given, is, that there has not been in *smell* that exact and frequent coexistence of feelings which has occurred in *vision*. It surely is not more wonderful, therefore, that the same argument should hold in the *acquired perceptions* of *touch*, in which the coexistence is still more frequent and exact. When we listen to a flute, our muscles may be contracted as before, or quiescent as before; when the odour of a rose is wafted to us, not a single muscle may be more or less affected. But, without the action of muscles, we cannot grasp a ball, nor press against a resisting body, nor move our hand along its surface. Whatever feelings, therefore, are involved in muscular contraction, *may be*, or rather I may say, *if the common laws of association operate, must* be associated with the simple feelings thus constantly coexisting, whatever they may be, which the organ of touch originally affords. To suppose, that, in a case of *such frequent coexistence or succession*, no association takes place, and that our feelings of touch, are, *at this moment*, as simple as they were originally, would surely be to suppose the universal influence of the associating principle to be suspended in this particular case.

I have already explained the manner, in which, I suppose, the infant, to obtain the notion of something *external* and *separate* from himself, by the interruption of the usual train of antecedents and consequents, when the *painful feeling of resistance* has arisen, without any change of circumstances, of which

the mind is conscious in itself; and the process by which he acquires this notion, is only another form of the very process, which, during the whole course of his life, is involved in all his reasonings, and regulates, therefore, all his conclusions, with respect to *every physical* truth. In the view which I take of the subject, accordingly, I do not conceive that it is by any *peculiar* intuition, we are led to believe in the existence of things without. I consider this belief as the effect of that more general intuition, by which we consider a new *consequent*, in any series of accustomed events, as the sign of a new antecedent, and of that equally general principle of association, by which feelings that have frequently coexisted, flow together, and constitute afterwards one complex whole. There is something which is not ourself, something which is representative of length —something which excites the feeling of resistance to our effort; and these elements combined, are *matter*. But, whether the notion arise in the manner I have supposed, or differently, there can be no doubt that it *has* arisen, long before the period to which our memory reaches; and the belief of an external world, therefore, whether founded directly on an intuitive principle of belief, or, as I rather think, on associations as powerful as intuition in the period which alone we know, may be said to be an essential part of our mental constitution, at least *as far back* as that constitution can be made the subject of philosophic enquiry. Whatever it may have been originally, it is now as *impossible* for us to disbelieve the reality of some external cause of our sen-

sations, as it is impossible for us to disbelieve the existence of the sensations themselves. On this subject, scepticism may be ingenious in vain; and equally vain, I may say, would be the attempted confutation of scepticism; since it cannot affect the serious internal belief of the sceptic, which is the same *before* as *after* argument; unshaken by the ingenuity of his own reasonings, or rather, as I have before remarked, tacitly assumed and affirmed in that very combat of argument, which professes to deny it.

It is in vain, that Berkeley asserts his system, with a zeal and acuteness, which might, perhaps, have succeeded in convincing others, *if* they could only have previously succeeded in convincing himself, not as a speculative philosopher merely, but as a *human being*, conversant with his kind, acting, and suffering, and remembering, and hoping, and fearing. This, however, was more than mere ingenuity of argument could perform. Even in publishing his work with the sincere desire of instructing and converting others, the great and primary convert was yet to be made, in the *converter himself*.

In the Life of Berkeley, prefixed to the edition of his collected works, an account is given of a visit which he paid, at Paris, to Malebranche, the celebrated author of a system, in many respects similar to his own. He found him in a weak state of health, but abundantly eager to enter into disputation, on a science which he loved, and especially on his own doctrines, which he loved still more; but the discussion was at last carried on with more vehemence

than the feeble bodily frame of Malebranche could bear; and his death was said to be occasioned, or at least hastened, by this unfortunate intellectual combat. When we consider this interview of two illustrious men, each of whom, in accordance with his own system, must have been incapable of any direct knowledge of the existence of the other, the violent reciprocal action of these mutual nonentities, might seem ludicrous, if there were not, in the death of any one, and especially of a philosopher so estimable in every respect as the author of The Search of Truth, something too serious to be consistent with any feeling of levity. It is more suitable, both to the occasion itself, and to our own intellectual weakness, to regard this accidental interview of two philosophers, contending so strenuously against each other, for the truth of doctrines, which rendered the real existence of each, at best, very problematical, as only a striking instance of the readiness with which all the pride of human reason yields itself, as it were, spontaneously and humbly, to the sway of *those more powerful principles*, which He, who has arranged our mutual constitution, has so graciously accommodated to the circumstances in which He has placed us. The gift of reason itself, that most inestimable of our intellectual gifts, would have been truly, if nothing more had been added to it, a *perilous* acquisition, to beings not absolutely incapable of error; since these are points on which a single mistake, if there had been no opportunity of repairing it, might have been fatal, not to our happiness merely, but to our very existence. On these points, however, Nature has not

left us to a power so fallible, and to indolence, which might forget to exercise even this feeble power. She has given us principles which do not err, and which operate without the necessity of any effort on our part. In the wildest speculative errors, into which we may be led, there is a voice within, which speaks, indeed, only in a whisper, but in a whisper of omnipotence, at which the loud voice that led us astray, is still,—thus operating on our *mind*, as the secret irresistible influence of gravitation operates on our *body*, preserving it, amid all the disorder and irregularity of its spontaneous motions, still attached to that earthly home which has been prepared with every bountiful provision for our temporary residence.

If there were, indeed, any sceptic as to the existence of an external world, who could seriously profess that his practical conduct was in accordance with his speculative disbelief, we might very justly exercise, with respect to his own *profession*, that *philosophic doubt* or *disbelief*, which he recommends. Pyrrho, the great founder of this philosophy, is, indeed, said to have acted so truly on his principles, that if a cart ran against him, or a dog attacked him, or if he came upon a precipice, he would not stir a foot to avoid the danger. "But his attendants," says Dr Reid, "who, happily for him, were not so great sceptics, took care to keep him out of harm's way, so that he lived till he was ninety years of age." * In all these cases, we may safely take for granted, that this venerable sceptic, when he exhibited himself with his

* Reid's Inquiry into the Human Mind, chap. i. sect. 5.

domestics, knew, at least as well as the spectator, the nature of the *comedy* which he was acting, for *their entertainment*, and his own *imagined glory*;—that he could discriminate, with perfect accuracy, the times when it would be *safe*, and the times when it would be *unsafe*, for him to be *consistent*;—and that he would never feel, in so strong and lively a manner, the force of his own principles, as when he was either absolutely alone, or with attendants within a very few inches of the ground on which he was philosophizing. We are told, accordingly, that when his passions were too strongly roused, to allow him to remember the part which he was acting, he entered with sufficient readiness into his native character of a *mere human being*. Of this, one ludicrous instance is recorded, in which his anger against his cook so completely got the better, both of his moral and physical philosophy, that, with the spit in his hand, and the meat on it, which had been roasting, he pursued him to the very market-place. Many stories of this sort, however, we may well suppose, would be invented against philosophers, of a class, that at once challenged the opposition of the whole mob of mankind, and afforded subjects of that obvious and easy ridicule, which the mob of mankind, even without the provocation of such a challenge, are always sufficiently ready to seize.

Into a detail of the sceptical system of Berkeley, it is unnecessary to enter at any length; since, notwithstanding the general acuteness which its truly illustrious author has displayed in this, and in all his works, I cannot but consider his *ideal system*, as

presenting a very *imperfect* and *inaccurate* view, not merely of the real *phenomena* of the mind, but even of the *sceptical argument against* the existence of matter. It was not as a sceptic, however, that this most devout and amiable of philosophers, to whom Pope scarcely paid a higher compliment than was strictly due, in ascribing to him "every virtue under heaven," *—it was not as a *sceptic* that *he* was desirous of being ranked. On the contrary, I have no doubt that his system seemed to him valuable, chiefly for being, as he conceived, an antidote to scepticism, and that he was far less anxious to display acuteness, than to expose the sophistry of materialism, and to present, as he thought, an additional argument for the existence of a divine omnipresent mind, which unquestionably it would have afforded, and an argument too, it must be owned, completely irresistible, if our *mere ideas* were what he conceived them to be. These, he evidently considered, not as *states* of the *individual mind*, but as *separate things* existing in it, and capable of existing in *other minds*, but in them alone; and, it is in consequence of these assumptions, that his system, if it were to be considered as *a system of scepticism*, is chiefly defective. But having, as he supposed, these ideas, and conceiving that they did not perish, when they ceased to exist in his mind, since the *same ideas recurred* at intervals, he deduced from the necessity which there seemed for some *omnipresent mind*, in which they might exist during the intervals of recurrence, the necessary existence of the Deity; and if, indeed, as he supposed,

* Epilogue to the Satires, Dial. II. v. 73.

ideas be something different from the mind itself, recurring only at intervals to created minds, and incapable of existing but in mind, the demonstration of some infinite omnipresent mind, in which they exist during these intervals of recurrence to finite minds, must be allowed to be perfect. The precise nature of the argument, and its *demonstrative force*, if the hypothetical circumstances which Berkeley himself was far from considering as hypothetical, be admitted, have not been sufficiently regarded by philosophers, when they express their astonishment, that a system, which, if not scepticism, is at least so much akin to it, or so favourable, at least, to the general sceptical spirit, should yet have been brought forward, as its truly pious author informs us, for the express purpose of combating *scepticism*. He is not, indeed, always a very perspicuous unfolder of his own opinions, but in a passage of his third Dialogue, the series of propositions which I have now stated as constituting his demonstration, are delivered by himself, with great distinctness and brevity. "When I deny," says Philonous to Hylas, "when I deny sensible things, an existence out of the mind, I do not mean *my* mind in particular, but all minds. Now, it is plain, they have an existence exterior to *my* mind, since I find them, by experience, to be independent of it. There is, therefore, some other mind wherein they exist during the intervals between the times of my perceiving them, as likewise they did before my birth, and would do after my supposed annihilation. And, as the same is true with regard to all other finite created spirits, it necessarily follows, there is

an *Omnipresent Eternal Mind*, which knows and comprehends all things, and exhibits them to our view, in such a manner, and according to such rules, as he himself hath ordained, and are by us all termed the *laws of Nature*."

The existence of ideas as separate from the mind, and the permanent existence of these, when they have ceased to exist in the individual mind, are evidently assumptions as gratuitous as the assumption of the external existence of matter itself could have been; or rather, the permanent and independent ideas, are truly *matter*, under another name; and to believe that these *foreign independent* substances, which pass from mind to mind, exist *in* the mind, is not to *intellectualize matter*, but to *materialize intellect*. A mind *containing*, or capable of *containing* something *foreign within* itself, and not merely *one* foreign substance, but a multitude of foreign substances, at the same moment, is no longer that *simple indivisible existence*, which we termed spirit. Any of the elementary atoms of matter is, indeed, more truly spiritual; the very notion of *recipiency* of any kind, being as little consistent with our notion of mind, as the notion of hardness or squareness.

The whole force of the pious demonstration, therefore, which Berkeley flattered himself with having urged irresistibly, is completely obviated, by the simple denial, that ideas are anything more than the *mind itself affected in a certain manner*; since, in this case, our ideas exist *no longer* than our mind

* Three Dialogues, &c. p. 109—110.

is affected, in that particular manner, which constitutes each particular idea; and, to say that our ideas exist in the divine mind, would thus be to say, only, that our mind itself exists in the divine mind. There is not the *sensation of colour*, in *addition to the mind*, nor the sensation of fragrance in *addition to the mind*; but, according to that juster view of the mental phenomena, which I have repeatedly endeavoured to impress on you, the sensation of colour is *the mind existing in a certain state*, and the *sensation of fragrance*, is the mind existing in a different state.

The most philosophic scepticism, as to the existence of external things, is unquestionably *that*, which is founded on this very view of the phenomena of the mind. All the terms, which we use, to express our knowledge, sensations, perceptions, ideas, notions, propositions, judgments, intuitions, conclusions,—or whatever other terms we may employ to express particular varieties of thought, are significant, it may be said, and truly said, of *states* or *affections* of the *mind*, and of *nothing more*. What I term my *perception* of the colour, or softness, or shape, or fragrance, or taste of a peach, is a certain state of my own mind, for my mind surely can be conscious only of its own feelings; or rather, as the *consciousness* of *present feelings* is a redundancy of language, my mind, affected in a certain manner, whether it be with what is termed sensation or knowledge, or belief, can still be nothing more than my mind itself affected in a certain manner,—my mind, itself existing in a certain state.

Against this argument, I confess that I know no *mere argument* which can be adduced in opposition, —any more, than I know any *mere argument* which can be adduced, against the strange conclusions that are most legitimately drawn from the doctrine of the infinite divisibility of matter, and various other physical and mathematical applications of the notion of infinity. In no one of these cases, however, do we feel our belief shaken;—because it is founded either on associations so early, and strong, and indissoluble, as those which we have been endeavouring to trace, or is not in those, or in principles of direct intuition, in that species of internal revolution which gives to reason itself, in the primary truths on which every argument proceeds, its divine authority; and we only smile at conclusions, in which it is impossible for us to find a single logical error, but which, from the consitution of our nature, it is physically impossible for us to admit, or to admit at least, without an instant dissent, which renders our momentary logical admission as nugatory, as if the direct existence of an external world had been established by the clearest logical demonstration.

In one of the Anniversary Orations of Sir William Jones, of which the subject is the philosophy of the Asiatics, he informs us that a system of idolism, very similar to that of Berkeley, is to be found in the metaphysics of Hindostan. The fundamental tenet of one great school of the philosophers of that ancient land of philosophy, is the disbelief of the existence of matter—the phenomena of the seeming

material universe, being conceived by them to be only an illusive representation which the Deity presents to the mind, (and which they distinguish by the name of Maja:)—while the opposite species of scepticism is to be found in another sect of the philosophers, who disbelieve the existence of mind, and reduce all the phenomena of thought to material organization. The same subtilty and refinement of scepticism, which have led to the systems of materialism and idolism in our Western World, are to be found, we are told, in the corresponding systems of the East.*

Why is it that we are struck with no common emotion on finding, in the metaphysics of that distant country, systems of opinions so similar to our own? Is it that the notion of the immense space, which separates us, unites with our conception, and impresses us, as it were, with the *omnipresence of our own intellectual nature*,—when we recognize, on scenes so remote, and in circumstances of society so different, the same thoughts, and doubts, and errors, which have perplexed, and occupied, and delighted ourselves? This recognition, in whatever circumstances it may occur, gives to us a feeling of more than kindred,—a sort of identity with the universal nature of man, in all its times and places. The belief which others share with us seems to be our own belief, which has passed from each to each, or is present to all, like those permanent ideas of which

* The substance of this reference occurs in the Eleventh Anniversary Discourse,—*Works*, v. i. p. 165—6. *4to. Edit.*

Berkeley speaks, that quit one intellect to exist in another. We cannot separate the thought which we remember from the notion of the mind which we remember to have conceived it;—and it seems to us, therefore, not as if *similar* doubts and errors, but almost as if the *very* doubts and errors of our own mind, and its ardour of inquiry, and frequent disappointments, and occasional, but rare felicities of discovery, had spread and renewed themselves in a remote existence. It is this recognition of our common nature, which gives the chief interest to scenes that have been occupied with the passions of beings like ourselves. The mountains, which the Titans were fabled to have heaped up in their war against Jupiter, must have excited even in the most devout believers of Grecian mythology, emotions far less ardent and immediate, than the sight of the humbler cliffs, at which the small Spartan host, and their gallant leader, devoted themselves in the defensive war against the Persian invader. The races of men may perish, but the remembrance of them still lives *imperishable*, and seems to claim kindred with us, as often as we tread the same soil, or merely think of those who have trod it.

" Turn thy sight eastward, o'er the time-hush'd plains,
Now graves of vanish'd empire, once gleam'd o'er
From flames on hallow'd altars, hail'd by hymns
Of seers, awakeners of the worshipp'd *Sun!*
Ask silent Tigris—Bid Euphrates tell
Where is the grove-crown'd *Baal*, to whose stern frown
Bow'd haughty Babylon?—Chaldea, famed
For star-taught sages,—hard Phenicia's sons,

Fierce, fear-surmounting curbers of the deep,
Who stretch'd a floating sceptre o'er the seas,
And made mankind one empire?—Where is now
Egypt's wide-homag'd *Isis*?—where the *Thors*,
That shook the shakers of the Roman world?"

The very gods of all these countries have perished, but the mortals who bent the knee before them still survive in the *immortality of our common nature*,—in that universal interest which gives to us a sort of intellectual existence in scenes and times the most remote, and makes the thoughts and emotions of others as it were a part of our own being,—uniting the past, the present, and the future, and blending man with man wherever he is to be found.

LECTURE XXIV.

THE SAME SUBJECT, CONTINUED.

GENTLEMEN, having stated, in a former Lecture, the reasons which seem to *show*, that the origin of our notion of *extension*, and of the notions, which it involves, of *figure*, *magnitude*, *divisibility*, is *not* to be found *in our sense of touch*, I endeavoured, in my last Lecture, to trace these to their real source, —cautioning you at the same time, with respect to the *great difficulty of the inquiry*, and the very *humble reliance*, therefore, which we can have any title to put, on the results of our investigation of a subject *so very obscure*.

In our *present circumstances*, when we attempt such an investigation, it is impossible for us to derive even the slightest aid, from *remembrance of our original feelings*; since *memory*,—which afterwards can look back through so many long and busy years, and comprehend *all* of life, but the very *commencement of it*,—sees yet, in this dawn of being, a darkness which it cannot penetrate. We have already formed,—spontaneously, and without the aid of any

one,—our *little system of physical science*, and have, in truth, enriched ourselves with acquisitions, far more important than any which we are afterwards to form, with all the mature vigour of our faculties, and all the splendid aids of traditionary philosophy,—at a time, when we seem scarcely capable of more than of *breathing* and *moving*, and *taking our aliment*, and when the faculties, that leave us so much invaluable knowledge, are to leave us no knowledge of the means, by which we have acquired it.

To the period of our *first sensations*, therefore, we *cannot* look back; and, hence, all which remains for us, in an inquiry of this kind, is to consider *the circumstances in which the infant is placed*, and to *guess*, as nearly as general analogy will allow us, the nature and the order of the *feelings*, which, in such circumstances, would arise, in a being possessing the *powers* and *susceptibilities* of man, but destitute of all the *knowledge* which man possesses.

In these first circumstances of life, the infant, of course, cannot know that he has a *bodily frame*, or a single *organ* of that frame, more than he can know, that there are other bodies in nature, that act upon his own; and we are not entitled to suppose, —however difficult it may be for us to accommodate our supposition to the true circumstances of the case, —that because *we*, the *inquirers*, know, that external bodies are pressing on his organ of touch, the little sensitive being is to have *any* knowledge, *but* of the *mental affections*, which these external bodies excite. How the knowledge of any thing more than

his own mind is acquired, is, in truth, the *very* difficulty, which it is our labour to solve.

In conformity with this view, then,—when we look on the infant,—one of the most remarkable circumstances, which strike us, is its tendency to use its muscles, with almost incessant exercise, particularly the muscles of those parts, which are afterwards its principal *organs of measurement.* Its little fingers are continually *closing* and *opening*, and its little arms *extending* and *contracting.* The *feelings*, therefore,—whatever these may be,—which attend the *progressive contraction of those parts*,—and some feeling unquestionably attends the *contraction* in all its stages,—*must* be continually arising in its mind, *beginning* and *finishing*, in *regular series*, and *varying exactly*, with the *quantity* of the *contraction.*

A *succession* of feelings, however, when *remembered* by the mind, which *looks back upon them*, we found to *involve, necessarily*, the notion of *divisibility* into separate parts, and, therefore, of length, which is only another name for *continued divisibility.* Time, in short, is to our conception, a series in constant onward progress, and cannot be conceived by us, *but as* a progressive series, of which our *separate feelings* are *parts;* the remembrance of the events of our life, whenever we take any distant retrospect of them, being like the *remembrance* of the *space*, which we have *traversed* in a journey,—*an indistinct continuity of length*,—as truly *divisible*, in our conception, into the *separate events* which

we *remember*, as the *space*, which we remember to have traversed, into its separate variety of *scenes*.

Time, then, or *remembered succession*, we found to *involve*, not *metaphorically*, as is commonly said, but *truly* and *strictly*, in its very essence, the notions of *length* and *divisibility*,—the great elements of *extension*; and whatever other feelings may be *habitually* and *uniformly associated* with these, will involve, of course, these elementary notions.

The *series of muscular feelings*, of which the infant is conscious,—in incessantly closing and opening his little hand,—*must*, on these principles, be accompanied with the notion,—not, indeed, of the existence of his hand, or of any thing external,—but of a certain *length* of *succession*; and each *stage of the contraction*, by frequent renewal, gradually becomes significant of *a particular length*, corresponding with the portion of the series. When any hard body, therefore, is placed in the infant's hand,—though he cannot, indeed, have any knowledge of the *object*, or of the *hand*,—he yet feels, that he can no longer perform the accustomed contraction,—or, to speak more accurately,—since he is *unacquainted* with any *parts* that are *contracted*, he feels, that he can no longer *produce his accustomed series of feelings*; and he knows the *quantity of contraction*, which remained to be performed, or rather the *length* of the series, which remained to be felt. The place of this *remaining length* is now *supplied* by a new *feeling*, partly muscular, and partly the result of the affection of the compressed organ of touch,—and is

supplied by the *same feeling*, at the *same point of the series, as* often, as he attempts to renew the contraction, while the body remains within his hand. The *tactual feeling*, therefore,—whatever it may be,—becomes, by this frequent repetition, *associated* with the notion of that particular progressive series, or length, of which it thus uniformly supplies the place; and at last becomes *representative* of this particular length, precisely in the same manner, as, in the acquired perceptions of vision, certain *shades of colour* become *representative* of *distance*, to which they have, of themselves, no resemblance or analogy whatever; and we thus *learn* to *feel length*, as we *learn* to *see* length,—not directly by the mere affections of our *tactual* or *visual organs*, but by the *associated notions* which they *suggest*.

If *time*,—as perceived by us in the continued series of our feelings,—*do* involve conceptual *length* and *divisibility*, it seems, indeed, scarcely possible, that, in the *circumstances supposed*, the *notions supposed* should not arise,—that the infant should be conscious of a *regular series* of feelings, in the contraction of its fingers and arms, and yet that *portions of this series* should not become *significant* of *various proportional lengths*;—and, if the notion of certain proportional lengths *do* truly accompany certain degrees of progressive contraction, it seems equally impossible, according to the general prinples of our mental constitution, that the compound tactual and muscular *feeling*, which must arise in every case, in which any one of these degrees of contraction is impeded, should not become associated

with the notion of that particular length, of which it supplies the place, so as at last to become truly representative of it.

In this manner, I endeavoured to explain to you, how our knowledge of the mere length of bodies may have been acquired, from varieties of length that are recognized as coexisting and proximate, and are felt to unite, as it were, and terminate in our sensation of resistance, which interrupts them equally, and interrupts always a greater number of the coexisting truths, in proportion to the size of the body compressed; and, in a similar manner, our notions of the *other* dimensions of bodies, which are only these varieties of length in different directions. I cannot conclude this summary, however, without recalling to your attention, a *very simple experiment*, which I requested you to make for yourselves,—an experiment, that, even in the *unfavourable* circumstances in which it must now be tried, is yet, I conceive, demonstrative of the influence of *mere time*, as an element of that complex notion, which we have been examining, when the more rapid measurements of *vision*,—which are confessedly not *original* but *acquired*,—are excluded. If, in passing our finger, with different degrees of slowness or rapidity, along the *same surface*, with our eyes shut,—even though we should previously know the exact boundaries of the extent of surface,—we feel it almost impossible *not* to believe,—and but for the contrary evidence of vision, could not have hesitated a single moment in believing,—that this extent is *greater* or *less*, according as the *time*, employed in performing *ex-*

actly the same quantity of motion, with *exactly the same force of pressure*, on the *same quantity of our organ of touch*, may have been *greater* or *less*,—it must surely be admitted, that the notion of the *length*, which thus uniformly varies with the time, when all other circumstances are the same, is not absolutely *independent of the time*,—or it must, in like manner, be believed, that our notion of visual distance, which varies with the distribution of a few rays of light on the small expanse of the optic nerve, is yet *independent* of those faint *shades of colouring*, according to the mere varieties of which, it seems at one time to lay open to our view a landscape of many miles, and at another time to present to us, as it were before our very eyes, an object of scarcely an inch in diameter. The greater dimness, and diminished size of a few objects in the back ground of a picture, which is in itself one coloured plane of light, does not more truly seem to increase the line of distance of those objects, than, in the other case, the increased slowness of the motion of our hand along any surface, seems to lengthen the line which separates one of its boundaries from the other.

That we *now* seem to perceive *extension*, immediately by *touch*, cannot be denied; and, in a case so obscure as this,—with our very limited *knowledge*, and our very limited power of *adding to this knowledge*,—it may seem the most *prudent*, and perhaps even the most *suitable*,—as it is, without all question, by far the *easiest* part,—to acquiesce in the opinion, that the perception, which *now* seems im-

mediate, was so *originally*,—that the belief of the presence of an *external figured body* is, by the very constitution of our nature, attached to a *certain affection of the mere organ of touch*. But, since there are circumstances,—as we have seen,—which show this opinion, when very nicely examined, to be *inadmissible*, we may, at least, *attempt* to proceed a *little farther*, if we do this with a sufficient sense of the very great *difficulty* of the attempt, in relation to our power and knowledge,—and consequently with a very humble assurance, as to the *certainty* of any opinion which we may be led to form. To know the mind *well*, is to know its *weaknesses* as well as its *powers*; and it is precisely in a case of this sort, that he, whose knowledge is least imperfect, will be the best judge of its imperfection, and, therefore, the least disposed to put complete reliance on it in his own speculations,—or to assert it dogmatically, when he offers it, as all opinions, on so very obscure a subject, should be offered, to the *inquiry*, rather than to the undoubting *assent*.

The analysis, I own, is one which must require a considerable effort of attention on your part, because it is truly one of the most subtile on which I could call you to enter. But you must be aware, that this subtlety is in the nature of the very inquiry itself; since it is an inquiry into the *elements* and *progressive growth* of feelings, which seem to us, at present, *simple* and *immediate*, and that the alternatives, therefore, are not those of greater or less subtlety and refinement of analysis, but of *attempting* the analysis, or *abandoning* it altogether.

Before proceeding farther, in our inquiry with respect to the *origin of the notion of extension*, it may, however, be of advantage, to take a short *retrospect* of the progress which we have already made; for, if we have found *nothing more*, we have, at least, as I conceive, found reason to *reject a considerable part of our former belief on the subject*, which, though a *negative* acquisition, is yet a *very important one*. Though we should not be able to discover the *true* source of the notion which we seek, it is something, at least, to know, that we have little reason to expect to find it, where we have uniformly been accustomed to seek it.

In the first place, then, we have seen the fallacy of the supposition, that our knowledge of extension may be easily accounted for, by the *similarity in figure of the compressed part of the organ of touch to the compressing body*, since *the notion of extension* is not a *state of the material organ*, compressed and figured, which, as mere matter, however exquisitely organized, is as little capable of *this notion*, as of *smell*, or *taste*, *love* or *aversion*, but, a state of the *mind itself*, which is susceptible of shape or pressure, being as little square, when it perceives a square, as when it perceives a circle; and *any* affection of which, therefore, may be supposed as much to follow any *one shape*, as any *other* shape of the mere external organ. If, indeed, as this explanation most strangely seems to assume, we could be supposed to have any *previous knowledge of the shape of our organ of touch*, nothing more would be necessary, for we should then have *a perfect knowledge of extension*,

though no other extended body but our own organ of touch were in existence. To refer us to the organ is, however, only to bring the very same difficulty *one step nearer*, since previously to the application of an external body, the mind has as little knowledge of the shape of its *organ of touch*, as it has of the *body compressing it;* and it is manifestly most absurd, to ascribe the origin of *our knowledge of extension*, to our knowledge of the *resemblance in figure of an external body to our organ;* since this very knowledge of the *resemblance* must imply the previous knowledge of *the figure of both*, and consequently of *that very extension*, which, according to this supposition, must be *known* to us BEFORE *it is known.*

In the second place, we have seen, that, if *the configuration of the sensorial organ* were the only circumstance necessary, to induce, immediately, in mind, the notion of *figure*, this notion should accompany every sensation of every kind; the *smell of a rose*, for example, as much *as the pressure of a cube or a sphere:* for the nervous expansion, in the organ of *smell*, and in *every other organ*, is of a *certain figure*, *before* sensation, *during* sensation, and *after* sensation, as much as the nervous expansion of the *organ of touch.* And, though we were to confine ourselves wholly to this organ, the nervous matter in *it* is, at *all times*, of a certain shape, *as much when there is no pressure on it*, as *when it is exposed to such pressure;* yet the *mere figure* of the organ of touch, is not then accompanied with the mental *notion* of its figure; nor is this

the case, merely when the sense is *quiescent*, but, in many cases, in which it is affected in the most lively manner; as, for example, when we are exposed to great *cold* or *heat*, in which cases, the shape of this very tactual organ, thus strongly affected, is as much unperceived by us, as when there is no affection of it whatever.

Lastly, which is a point of much more importance, because it has relation to the only philosophic view of touch, as the *immediate organ* of extension; the view, in which the mere configuration of the compressed organ, as similar to that of the compressing body, is laid out of account, and the immediate belief of extension is supposed to depend on the *original constitution of the mind*, by which its affections have been *arranged*, so as to correspond with certain affections of the bodily organs; the mental state which constitutes the *perception of a square*, arising immediately when the *organ of touch* is affected, in a certain manner, as that mental state which constitutes the sensation of the *fragrance of a rose*, arises immediately, when the *organ of smell* is affected, in a certain manner; this opinion too, philosophic as it is, compared with those which we before considered, though, in truth, it only assumes the point in question, without attempting to solve any difficulty, supposed to be connected with it, we have yet found to be as little *tenable*, as the opinions that suppose *the mental notion of figure* to depend on *the peculiar figure of the compressed material organ*. The consideration which, as I stated in my last Lecture, seems to me decisive on this point, is,

that, if touch inform us of extension immediately, as smell informs us of fragrance, sight of colour, and hearing of sound; it must do this *in every instance*, without relation to particular figure, as smell, sight, and hearing, extend to all odours, hues, and sounds; for it would certainly be, as I said, a very strange abuse of the licence of supposition, to imagine that we perceive a *square* immediately by touch, but not a *circle*; or a circle, but not a square; or any one figure, but not any other figure. In short, if figure be the direct primary object of touch, as sight is of vision, we should feel immediately *every* form impressed, as we see immediately *every* colour. It is only when the figures are *very simple and regular*, however, such as we might be supposed to have easily *learned*, in the same manner as we learn, visually, to judge of distances, that we are able to *discover* them, as it were, *immediately*, by touch; and, even when we are able, in this manner, to determine the *species of figure*, that is to say, the mere outline of a body, we are rarely able to determine the exact magnitude which that outline comprehends; yet, as our organ must be affected by *each part* of the compressing surface, by the central parts, as much as by the exterior parts which form its outline, and by these, as much as by the central parts; and as every feeling which the *organ directly* affords, must be *immediate*, when there is no change of the position, or other circumstances of the object, that might vary the sensation, we should, if mere touch communicated to us the knowledge supposed, be able to determine, *exactly* and *instantly*, the magnitude and figure; or,

it is evident, that the determination of magnitude and figure must depend wholly, or in part, on something that is different from touch. The magnitude we are far from being able to discover exactly, even of simple figures; and, when the *form* is *very irregular*, and we know nothing more, than that a certain body is pressed against our hand,—the *magnitude* and *figure* are *alike* difficult to be discovered; so difficult, that I may safely say, that no one, who makes the experiment, will find, on opening his eyes, that his tactual or intellectual measurement has, in any one case, been exact, or his notion of the *figure* half so distinct as it now is, *after a single glance*. Can we then think that it is by *mere touch* we discover figure, as exactly as by the glance of our mature vision,—that we discover it, in all its varieties, *originally* by touch, and *as accurately at first, as after innumerable trials*,—when we discover it, only in a few cases, that are previously familiar to us, and even in these very imperfectly? The *determination* of the form impressed, in which we are almost conscious of a sort of intellectual measurement, has surely a much greater resemblance to the perceptions, which we term *acquired*, than to those which are *immediate*. In vision, for example, when the original power of that sense has been strengthened and enriched, by the acquisitions which it is capable of receiving from other sources, we see a long line of distance before us; and the *small* distances with which we are *familiar*, we distinguish with sufficient accuracy; but, in our visual measurement of *greater distances*, we are almost certain to err, taking often the less for the

greater, and the greater for the less. It is precisely the same in *touch*. When a small body, which we have never seen, is pressed upon our hand, we are able, if its surface be *square*, or *circular*, or of any other form, with which we are well acquainted, to determine its figure, without much hesitation; because we have *learned*, tactually, to distinguish these regular figures. But, in endeavouring to determine, in this manner, by touch alone, the figure of any *irregular* body, *less familiar to us*, though, as a direct object of sense, if touch be the sense of figure, it should be equally and as immediately tangible as the most regular form, we feel a hesitation of the same sort, as when we attempt to ascertain, by our eye, the *exact distance of a remote object*. To know *extension* or *figure*, is to know, not *one* point merely in the surface of a body, but *many continuous points*; and if, when the surface is circular, we know these continuous points, and their relation to each other, *immediately on pressure*, we must know, as immediately, the same points and their relations, though the surface comprehending them, instead of being *circular*, should be of an outline more irregular. We certainly cannot know this irregular surface to have *any extension at all*, unless we know *some* parts of it; and, when the pressure is *uniform* from every point, and the organ of touch *uniform*, on which the pressure is made, it would be absurd to suppose, that we know fifty, or eighty, of the hundred points which form the impressing surface, but cannot determine its *figure*, because we are ignorant of the twenty or fifty remaining points; when these re-

maining points are acting on our organ of touch, in exactly the same manner as the fifty or eighty which we know, and when, if *the surface containing* merely the same number of points, had been circular, or of any other single form, as familiar to us, *the whole hundred points* would have been known to us *equally* and *at once.*

When our perceptions of form, then, are so various and irregular, and are more or less quick and precise, exactly as the shape which we endeavour to determine, has more or less resemblance to shapes that are familiar to us, it does not seem too bold an inference to conclude, that the knowledge of *figure*, which, as all extension that is capable of being perceived by us, must have some *boundary*, is nothing more than the knowledge of *extension*, is *not* the state of mind *originally* and *immediately subsequent* to *affections of our organs* of *touch*, any more than the perception of *distance* is the state of mind originally and immediately subsequent to affections of our organ of sight; and the very striking analogy of these two cases, it will be of great importance for you to have constantly in view; as it will render it less difficult for you to admit many circumstances, with respect to *touch*, which you might otherwise have been slower to conceive. That we should seem to perceive *extension* immediately by touch, though touch *originally*, and of *itself*, could not have afforded this perception, will not then appear more wonderful, than the apparently immediate perception of *distance* by the *eye*, which, of itself, originally afforded us no per-

ception of that sort; nor the *impossibility* of *feeling* a body, without the notion of it, as *extended*, be more wonderful than the *similar* impossibility of separating *colour* from *extension*, in the case of distant vision. Above all, the analogy is valuable, as shewing the *closeness* and *indissolubleness* of the union, which may be formed of *feelings* that have in themselves no *resemblance*. What common properties, could we have conceived in *vision*, and that absolute *blindness*, which has never had a single sensation from light! and, yet, it is worthy of remark, that the perceptions of the blind, in consequence of this singular power of association, form truly the most important part of those very perceptions of vision, of which, as a whole, they are unfortunately deprived. We do not merely see with our eyes, what we may have felt with our hands; but our eyes, in the act of vision, have *borrowed*, as it were, those very sensations.

The proof, that our perception of *extension* by *touch*, is not *an original and immediate perception of that sense*, is altogether independent of the success of any endeavour which may be made, to discover the elements of the compound perception. It would not be *less true*, that touch does *not* afford it, though we should be incapable of pointing out any *other* source, from which it can be supposed to be derived. Of the difficulty of the attempt, and the caution with which we should venture to form any conclusion on the subject, I have already spoken. But the analysis, difficult as it is, is too interesting not to be attempted, even at the *risk*, or perhaps

I should rather say, with the *very great probability*, of failure.

In such an analysis, however, though we are to proceed with the greatest caution, it may be necessary to warn you, that it is a part of this very caution, not to be easily terrified, by the appearance of paradox, which the result of our analysis may present. This appearance we may be certain, that any analysis which is at all accurate *must* present, because the very object of the analysis is to shew, that sensations, which appear simple and direct, are *not* simple,—that our senses, in short, are *not* fitted, of themselves, to convey that information, which they now appear, and through the whole course of our *memory* have appeared to us, *instantly* to convey. It is very far, indeed from following, as a necessary consequence, that every analysis of our sensations which affords a paradoxical result, is, therefore, a just one—for error may be extravagant in *appearance* as well as in *reality*. But it *may* truly be regarded as a necessary consequence, that every accurate and original analysis of our *sensations must* afford a result, that, as first stated, will appear paradoxical.

To those who are wholly unacquainted with the theory of vision, nothing certainly can seem, as first stated, more absurd than the assertion, that we see, not with our eyes merely, but chiefly by the medium of another organ, which the blind possess in as great perfection as ourselves, and which, at the moment of vision, may perhaps be absolutely at rest. It must not surprise you, therefore, though the element which seems to me to form the most important con-

stituent of our notion of extension should in like manner, as first stated to you, seem a very unlikely one.

This element is our feeling of *succession*, or *time*, —a feeling, which, necessarily, involves the notion of *divisibility* or series of parts, that is so essential a constituent of our more complex notion of *matter*,— and to which notion of continuous divisibility, if the notion of resistance be added, it is scarcely possible for us to imagine, that we should not have acquired, by this union, the very notion of physical extension,—*that which has parts, and that which resists our effort to grasp it.*

That *memory* is a part of our mental constitution, and that we are thus capable of thinking of a *series of feelings*, as *successive to each other*, the experience of every moment teaches us sufficiently. This succession frequently repeated, *suggests immediately*, or *implies* the notion of *length*, not *metaphorically*, as is commonly said, but as *absolutely* as extension itself: and, the *greater the number* of the successive feelings may have been, the greater does this length appear. It is *not* possible for us to look back on the years of our life, since they form truly a progressive *series*, without regarding them as a *sort of length*, which is *more distinct* indeed, the *nearer* the succession of feelings may be to the moment at which we consider them, but which, however remote, is still felt by us as *one continued length*, in the same manner, as when, after a journey of many hundred miles, we look back, in our memory, on the distance over which we have passed, we see, as it

were, a long track of which *some* parts, *particularly the nearer parts*, are sufficiently *distinct*, but of which the rest seems *lost* in a sort of *distant obscurity*. The line of our long journeying—or, in other words, that almost immeasurable line of plains, hills, declivities, marshes, bridges, woods,—to endeavour to comprehend which in our thought, seems an effort as fatiguing as the very journey itself—we know well, can be *divided* into those *various parts*:—and, in like manner, the *progressive line of time*—or, in other words, the *continued succession*, of which the joy, the hope, the fragrance, the regret, the melody, the fear, and innumerable other affections of the mind, were *parts*, we feel that we can mentally *divide* into those separate portions of the train. Continuous *length* and *divisibility*, those great elementary notions of space, and of all that space contains, are thus found in *every succession of our feelings*. There is no language in which *time* is not described as long or short,—not from any metaphor—for no *mere arbitrary* metaphor can be thus *universal*, and *inevitable*, as a form of human thought—but because it is truly impossible for us to consider *succession, without this notion of progressive divisibility attached to it*: and it appears to us as absurd to suppose, that by *adding*, to our retrospect of a week, the events of the month preceding, we do not truly *lengthen* the succession, as it would be to suppose, that we do not *lengthen* the line of actual distance, by adding, to the few last stages of a long journey, the *many* stages that preceded it.

It is this *spreading out of life* into a long expanse,

which allows man to create, as it were, *his own world.* He cannot change, indeed, the *scene of external things.* But this may be said, in one sense, to be the residence only of his *corporeal part.* It is the *moral scene* in which the *spirit* truly *dwells;* and *this* adapts itself, with *harmonious loveliness,* or with *horror* as *suitable,* to the character of its *pure* or *guilty* inhabitant. If but a *single moment of life,*—a physical *point,* as it were, of the long line—could be reviewed at once, conscience would have little power of retribution. But he who has lived, *as man should live,* is permitted to enjoy that best happiness *which man can enjoy,*—to behold, in one continued series, those years of benevolent wishes or of heroic suffering, which are at once his *merit* and his *reward.* He is *surrounded* by his own pure thoughts and actions, which, from the most remote distance, seem to shine upon him wherever his glance can reach; as in some climate of perpetual summer, in which the inhabitant sees nothing but fruits and blossoms, and inhales only fragrance, and sunshine, and delight. It is in a moral climate as serene and cloudless, that the destined inhabitant of a still nobler world moves on, in that glorious track, which has *heaven before,* and *virtue and tranquillity* behind;—and in which it is scarcely possible to distinguish, in the immortal career, when the *earthly* part has ceased, and the *heavenly* begins.

Is it in *metaphor* only, that a youth and maturity, and old age of guilt, seem to *stretch themselves out* in almost endless *extent,* to that eye which, with all its shuddering reluctance, is still *condemned* to

gaze on them,—when, after the long retrospect seems *finished*, some fraud, or excess, or oppression, *still rises* and adds to the *dreadful line*—and when eternity itself, in all the horrors which it presents, seems only a still longer line of the same dreadful species, that admits of no other measure, than the continued sufferings, and remembrance, and terrors that compose it!

It is a just and beautiful observation of an ancient Stoic, that *time* which is *past* is like something *consecrated to the gods*, over which fortune and mortality have no longer any power, and that, dreadful as it must be to the wicked, to whom their own memory is an object of terror, it still, to the virtuous, offers itself as a consolation or joy—not in single moments like the present hour, but in all that long *series* of years which rises before us, and remains with us at our bidding. "Ille qui multa ambitiosè cupiit, superbè contempsit, insidiosè decepit, avarè rapuit, prodigè effudit,—necesse est memoriam suam timeat. Atqui hæc est pars temporis nostri *sacra ac dedicata*, omnes humanos casus supergressa, extra regnum fortunæ subducta; quam non inopia, non metus, non morborum incursus exagitat. Hæc nec turbari nec erepi potest; perpetua ejus et intrepida possessio est. Singuli tantùm dies, et hi per momenta, præsentis sunt: at præteriti temporis omnes, cum jusseris aderunt, ad arbitrium tuum se inspici ac detineri patientur."

By those, who can look back on years that are *long past*, and yet say, that the *continued progress*,

or the *length* and the *shortness* of time, are only *metaphorical* expressions, it might be said, with equal justness, that the roundness of a sphere, is a metaphor, or the angularity of a cube. We do not more truly *consider* the one as *angular* and the other as *round*, than we consider the *time* to be continuously *progressive*, in which we considered, first the one figure, and then the *other*, and inquired into the properties of each. That which is progressive must have *parts*. Time, or succession, then involves the very notions of *longitudinal extension* and *divisibility*, and involves these, *without the notion of any thing external to the mind itself*;—for, though the mind of man had been susceptible only of *joy*, *grief*, *fear*, *hope*, and the other varieties of *internal feeling*, WITHOUT the possibility of being *affected by external things*, he would still have been capable of considering these feelings, as *successive* to each other, in a *long continued progression*, *divisible* into *separate parts*. The notions of *length*, then, and of *divisibility*, are not confined to *external things*, but are *involved*, in that very memory, by which we consider the series of the past,—not in the memory of distant events only, but in those first *successions* of feeling, by which the mind originally became conscious of its own permanence and identity. The *notion* of *time*, then, is precisely *coeval* with that of the *mind itself*; since it is implied in the knowledge of succession, by which alone, in the manner formerly explained to you, the mind acquires the knowledge of its own reality, as some-

thing more than the mere sensation of the present moment.

Conceiving the notion of *time*, therefore, that is to say of feelings past and present, to be thus one of the earliest *notions* which the infant mind can form, so as precede its *notions* of external things, and to *involve* the notions of *length* and *divisibility*, I am inclined to *reverse* exactly the process commonly supposed; and, instead of deriving the measure of *time* from *extension*, to derive the knowledge and original measure of extension from time. That one notion or feeling of the mind may be united indissolubly with other feelings, with which it has frequently coexisted, and to which, but for this coexistence, it would seem to have no common relation, is sufficiently shown by those phenomena of vision to which I have already so frequently alluded.

In what manner, however, is the notion of *time peculiarly* associated with the *simple sensation* of *touch*, so as to form, with it, the *perception* of *extension*? We are able, in the theory of *vision*, to point out the coexistence of sensations which produce the *subsequent union*; that renders the perception of distance apparently *immediate*. If a similar coexistence of the original *sensations of touch*, with the notion of *continued and divisible succession*, cannot be pointed out in the present case, the opinion, which asserts it, must be considered merely as a wild and extravagant conjecture.

The source of such a coexistence is not merely *to be found*, but is at least *as obvious*, as *that* which is universally admitted in the case of *vision*.

Before I proceed, however, to state to you, in what way I conceive the notion to be acquired, I must again warn you of the necessity of banishing, as much as possible, from your view of the mind of the infant in this early process, all those notions of external things, which we are so apt to regard as almost *original* in the mind, because we do not remember the time, when they arose in our own. As we know well, that there are external things, of a certain form, acting on our organs, which are also of a certain form, it seems so very simple a process, to perceive *extension*—that is to say, to know that there exist without us those external forms, which really exist—that to endeavour to discover the mode, in which extension, that now appears so obvious a quality of external things, is perceived by us, seems to be a needless search, at a distance, for what is already before our very eyes. And it will be allowed, that all this would, indeed, be very easy to a mind like ours, after the acquisitions of knowledge which it has made; but the difficulty of the very question is, how the mind of the infant makes these acquisitions, so as to *become* like ours. You must not think of a mind, that has any knowledge of things external, even of its own bodily organs, but of a mind simply affected with certain feelings, and having nothing but these feelings to lead it to the knowledge of things without.

To proceed, then,—The hand is the great organ of touch. It is composed of various articulations, that are easily moveable, so as to adapt it readily to

changes of shape, in accommodation to the shape of the bodies which it grasps. If we *shut* our hand *gradually*, or *open* it *gradually*, we find a *certain series* of feelings, varying with each degree of the opening or closing, and giving the notion of *succession* of a *certain length*. In like manner, if we gradually extend our *arms*, in various directions, or bring them nearer to us again, we find, that each degree of the motion is accompanied with a feeling that is distinct, so as to render us completely conscious of the progression. The gradual closing of the hand, therefore, must necessarily give a succession of feelings,—a succession, which, of itself, might, or rather *must*, furnish the notion of length, in the manner before stated, the length being different, according to the degree of the closing; and the gradual stretching out of the arm gives a succession of feelings, which, in like manner, must furnish the notion of length,—the length being different according to the degree of the stretching of the arm. To those who have had opportunities of observing infants, I need not say, *how much use*, or rather what constant use, the future inquirer makes of his *little fingers and arms;* by the frequent contraction of which, and the consequent renewal of the series of feelings involved in each gradual contraction, he cannot fail to become so well acquainted with the *progress*, as to distinguish *each degree of contraction*, and, at last, after innumerable repetitions, to associate with each degree the *notion of a certain length of succession*. The particular con-

traction, therefore, when thus often repeated, becomes the *representative of a certain length*, in the same manner as shades of colour, in vision, become ultimately *representative of distance*,—the same principle of association, which forms the combination in the one case, operating equally in the other.

In these circumstances of *acquired knowledge*,—after the series of muscular feelings, in the voluntary closing of the hand, has become so familiar, that the whole series is anticipated and expected, as soon as the motion has begun,—when a *ball*, or any other substance, is placed for the first time in the infant's hand, he feels that he can no longer perform the usual contraction,—or, in other words, since he does not fancy that he has muscles which are contracted, he feels that the usual series of sensations does not follow his will to renew it,—he knows *how much* of the accustomed succession is still *remaining*; and the notion of *this particular length*, which was expected, and interrupted by a new sensation, is thus associated with the *particular tactual feeling* excited by the pressure of the ball,—the greater or less magnitude of the ball preventing a greater or less portion of the series of feelings in the accustomed contraction. By the frequent repetition of this *tactual feeling*, as associated *with that feeling, which attends a certain progress of contraction*, the two feelings at last flow together, as in the acquired perceptions of vision; and when the process has been repeated with various bodies innumerable times, it becomes, at last, as impossible to *separate* the mere

tactual feeling, from the *feeling of length*, as to separate the *whiteness* of a *sphere*, in vision, from that *convexity* of the sphere, which the eye, of itself, would have been for ever incapable of perceiving.

As yet, however, the only dimension of the knowledge, of which we have traced the origin, is mere length; and it must still be explained, how we acquire the knowledge of the other dimensions. If we had had but *one* muscle, it seems to me very doubtful, whether it would have been possible for us, to have associated with touch any other notion than that of mere length. But nature has made provision, for giving us a wider knowledge, in the various muscles, which she has distributed over different parts, so as to enable us to perform motions in various directions at the same instant, and thus to have coexisting series of feelings, each of which series was before considered as involving the notion of length. The infant bends one finger gradually on the palm of his hand; the finger, thus brought down, touches one part of the surface of the palm, producing a certain affection of the organ of touch, and a consequent sensation; and he acquires the notion of a certain length, in the remembered succession of the muscular feelings during the contraction:—he bends another finger; *it*, too, touches a certain part of the surface of the palm, producing a certain feeling of touch, that coexists and combines, in like manner, with the remembrance of a certain succession of muscular feelings. When both fingers move together, the coexistence of the two series of successive feelings, with each of which the mind is fami-

liar, gives the notion of coexisting lengths, which receive a sort of unity, from the proximity in succession of the tactual feelings in the contiguous parts of the palm which they touch,—feelings, which have *before* been found to be proximate, when the palm has been repeatedly pressed along a surface, and the tactual feelings of these parts, which the closing fingers touch at the same moment, were always immediately successive,—as immediately successive, as any of the muscular feelings in the series of contraction. When a body is placed in the infant's hand, and its little fingers are bent by it as before, sometimes *one* finger only is impeded in its progress, sometimes *two*, sometimes *three*,—and he thus adds to the notion of mere length, which would have been the same, whatever number of fingers had been impeded, the notion of a certain number of proximate and coexisting lengths, which is the very notion of breadth; and with these, according as the body is larger or smaller, is combined always the tactual affection produced by the pressure of the body, on more, or fewer, of the interior parts of the palm and fingers, which had before become, of themselves, representative of certain lengths, in the manner described; and the concurrence of these three varieties of length, in the single feeling of resistance, in which they all seem to meet, when an incompressible body is placed within the sphere of the closing fingers,—however rude the notions of concurring dimensions *may* be, or rather *must* be, as at first formed,—seems at least to afford the rude elements, from which, by the frequent repetition of the feeling of resistance, together with

the proximate lengths, of which it has become representative, clearer notions of the kind may gradually arise.

The progressive contractions of the various muscles which move the arms, as affording similar successions of feelings, may be considered in precisely the same light, as sources of the knowledge of extension; and, by their motion in various directions, at the same time with the motion of the fingers, they concur powerfully, in modifying, and correcting, the information received from these. The whole hand is brought, by the motion of the arm, to touch one part of the face or body; it is then moved, so as to touch another part, and, with the frequent succession of the simple feelings of touch, in these parts, is associated the feeling of the intervening *length*, derived from the sensations that accompanied the progressive contraction of the arm. But the motion is not always the same; and, as the same feeling of touch, in one part, is thus followed by various feelings of touch in different parts, with various series of muscular feelings between, the notion of length in various *directions*, that is to say, of length in various series commencing from one power, is obtained in another way. That the knowledge of extension, or, in other words, the association of the notion of succession with the simple feelings of touch, will be rude and indistinct at first, I have already admitted; but it will gradually become more and more distinct and precise: as we can have no doubt, that the perception of distance by the eye, is, in the first stages of visual association, very indistinct, and becomes

clearer after each repeated trial. For many weeks or months, all is confusion in the visual perceptions, as much as in the *tactual* and *muscular*. Indeed, we have abundant evidence of this continued progress of vision, even in mature life, when, in certain professions that require nice perceptions of distance, the power of perception itself, by the gradual acquisitions which it obtains from experience, seems to unfold itself more and more, in proportion to the wants that require it.

The theory of the notion of extension, of which I have now given you but a slight outline, might, if the short space of these Lectures allowed sufficient room, be developed with many illustrations, which it is now impossible to give to it. I must leave you, in some measure, to supply these for yourselves.

It may be thought, indeed, that the notion of *time*, or *succession*, is, in this instance, a superfluous incumbrance of the theory, and that the same advantage might be obtained, by supposing the muscular feelings themselves, independently of the notion of their succession, to be connected with the notion of particular lengths. But this opinion, it must be remarked, would leave the difficulty *precisely as before*; and sufficient evidence, in confutation of it, may be found in a very simple experiment, which it is in the power of any one to make. The experiment I cannot but consider as of the more value, since it seems to me,—I will not say *decisive*, for that is too presumptuous a word,—but strongly *corroborative* of the theory, which I have

ventured to propose; for it shows, that, even after all the acquisitions, which our sense of touch has made, the notion of extension is still modified, in a manner the most striking and irresistible, by the mere change of accustomed *time*. Let any one, with his eyes shut, move his hand, with moderate velocity, along a part of a table, or any other hard smooth surface, the portion, over which he presses, will appear of a certain length; let him move his hand more rapidly, the portion of the surface pressed will appear *less;* let him move his hand *very slowly*, and the length, according to the degree of the slowness, will appear increased, in a most wonderful proportion. In this case, there is precisely the same quantity of muscular contraction, and the same quantity of the organ of touch compressed, whether the motion be rapid, moderate, or slow. The only circumstance of difference is the time, occupied in the succession of the feelings; and this difference is sufficient to give complete diversity to the notion of length.

If any one, with his eyes shut, suffer his hand to be guided by another, *very* slowly along any surface unknown to him, he will find it impossible to form any accurate guess as to its length. But it is not *necessary*, that we should be previously unacquainted with the *extent of surface*, along which the motion is performed; for the illusion will be nearly the same, and the experiment, of course, be still more striking, when the motion is along a surface with which we are perfectly familiar, as a book which

we hold in our hand, or a desk at which we are accustomed to sit.

I must request you, *not* to *take for granted* the result which I have now stated, but to repeat for yourselves an experiment, which it is so very easy to make, and which, I cannot but think, is so very important, as to the influence of *mere difference of time*, in our estimation of *longitudinal extent*. It is an experiment, tried, unquestionably, in *most unfavourable circumstances*, when our *tactual feelings*, *representative* of extension, are so strongly *fixed*, by the long experience of our life; and yet, *even now*, you will find, on moving your hand, *slowly* and *rapidly*, along the *same extent of surface*, though with *precisely the same degree of pressure in both cases*, that it is *as* difficult to conceive the extent, thus *slowly* and *rapidly* traversed, to be the *same*, as it is difficult to conceive the *extent of visual distance* to be *exactly the same*, when you look alternately through the different ends of an *inverted telescope*. If, when all other circumstances are the same, *the different visual feelings*, arising from difference of the mere direction of light, be *representative* of *length*, in the *one* case,—the *longer or shorter succession of time*, when all other circumstances are the same, has surely *as much* reason to be considered as *representative* of it, in the *other* case.

Are we, then, to believe, that the *feeling* of *extension*, or, in other words, of the definite figure of bodies, is a *simple feeling* of touch, *immediate, ori-*

ginal, and *independent of time*; or is there not rather reason to think, as I have endeavoured to show, that it is a *compound feeling*, of which *time*, that is to say, our *notion* of succession, is an *original element*?

LECTURE XXV.

ON THE DISTINCTION BETWEEN SENSATION AND PERCEPTION,—AND BETWEEN THE PRIMARY AND SECONDARY QUALITIES OF MATTER.

My last Lecture, Gentlemen, was chiefly employed in considering the nature of that complex process which takes place in the mind, when we ascribe the various classes of our sensations to their various external objects,—to the analysis of which process we were led, by the importance which Dr Reid has attached to the distinction of *sensation* and *perception*;—a sensation, as understood by him, being the simple feeling that immediately follows the action of an external body on any of our organs of sense, considered merely as a feeling of the mind; the corresponding perception being the reference of this feeling to the external body as its cause.

The distinction I allowed to be a convenient one, if the nature of the complex process which it expresses be rightly understood. The only question that seemed, philosophically, of importance, with re-

spect to it, was, whether the *perception* in this sense, —the reference of the sensation to its external *corporeal* cause,—imply, as Dr Reid contends, a peculiar mental power, coextensive with sensation, to be distinguished by a peculiar name in the catalogue of our faculties, or be not merely one of the results of a more general power, which is afterwards to be considered by us,—the *power of association*,—by which one feeling suggests, or induces, other feelings that have formerly coexisted with it.

It would be needless to recapitulate the argument minutely, in its relation to *all* the senses. That of smell, which Dr Reid has himself chosen as an example, will be sufficient for our retrospect.

Certain particles of odorous matter act on my nostrils,—a peculiar *sensation* of fragrance arises,—I refer this sensation to a rose. This reference, which is unquestionably something superadded to the original sensation itself, is what Dr Reid terms the *perception* of the *fragrant body*. But what is the reference itself, and to what source is it to be ascribed? That we should have supposed our sensations to have had a cause of some sort, as we suppose a cause of all our feelings *internal* as well as external, may indeed be admitted. But if I had had *no other* sense than that of smell,—if *I had never seen a rose*,—or, rather, since the knowledge which vision affords is chiefly of a secondary kind, if I had *no mode of becoming acquainted* with the compound of *extension* and *resistance*, which the mere sensations of smell, it is evident, are incapable of afford-

ing,—could I have made this reference of my sensation to a quality of a fragrant *body?* Could I, in short, have had more than the mere sensation itself, with that general belief of a cause of *some sort*, which is not confined to our sensations, but is common to them with all our other feelings?

By *mere smell*, as it appears to me, I could not have become acquainted with the existence of *corporeal substances*,—in the sense in which we now understand the term *corporeal*,—nor, consequently, with the *qualities* of corporeal substances; and, if so, how could I have had that *perception* of which Dr Reid speaks,—that reference to a fragrant *body*, of which, as a body, I was before in absolute ignorance? I should, indeed, have ascribed the sensation to some cause or antecedent, like every other feeling; but I could as little have ascribed it to a bodily cause, as any feeling of joy or sorrow. I refer it now *to a rose;* because, being endowed with *other* sensitive capacities, I have previously learned, from another source, the existence of *causes without*, extended and resisting,—because I have previously touched or seen a rose, when the sensation of fragrance coexisted with my visual or tactual sensation; and all which distinguishes the *perception* from the mere *sensation*, is this suggestion of former experience, which reminds me now of other feelings, with the continuance or cessation of which, in innumerable former instances, the fragrance itself also continued or ceased. The perception, in short, in smell, taste, hearing, is a *sensation suggesting, by association*, the notion of some extended and resist-

ing substance, *fragrant, vapid, vibratory*,—a notion which smell alone, taste alone, hearing alone, never could have afforded; but which, when once received from any other source, may be suggested by these as readily as any other associate feeling that has frequently coexisted with them. To the simple primary sensations of *vision* the same remark may be applied. A mere sensation of colour could not have made me acquainted with the existence of bodies, that would resist my effort to grasp them. It is only in one sense, therefore,—that which affords us the knowledge of *resistance*,—that any thing like original *perception* can be found; and even in *this*, the process of perception, as I formerly explained to you, implies no *peculiar* power, but only common *sensations*, with *associations* and *inferences* of precisely the same kind, as those which are continually taking place in *all* our reasonings and trains of thought.

Extension and *resistance*, I need scarcely repeat, are the complex elements of what we term matter; and nothing is *matter* to our conception, or a *body*, to use the simpler synonymous term, which does not involve these elements. If we had no other sense than that of smell, and, therefore, could not have referred the sensations to any fragrant *body*, what, in Dr Reid's meaning of this term, would the supposed power of perception, in these circumstances, have been? What would it have been, in like manner, if we had had only the sense of taste in sweetness and bitterness,—or of hearing in melody,—or of vision in colour,—without the capacity of knowing light

as a material substance, or the *bodies* that *vibrated*, or the *bodies* of another kind that were *sweet* or *bitter*? It is only by the sense of *touch*, or, at least, by that class of perceptions which Dr Reid ascribes to touch,—and which, therefore, though traced by us, in part, to another source, I, for brevity's sake, comprehend under that term in our present discussion,—it is only by *touch* that we become acquainted with those elements which are essential to our very notion of a *body*; and to *touch*, therefore, in his own view of it, we must be indebted, directly or indirectly, as often as we refer the sensations of any other class to a *corporeal* cause. Even in the supposed perceptions of touch itself, however, as we have seen, the reference of our feelings to an external cause is not demonstrative of any peculiar power of the mind, to be classed separately from its other faculties. But when a body is first grasped, in infancy, by fingers that have been accustomed to *contract* without being impeded, we learn to consider the sensation as the result of a cause that is *different from our own mind*, because it breaks an accustomed series of feelings, in which all the antecedents, felt by us at the time, were such as were before uniformly followed by a different consequent, and were expected, therefore, to have again their usual consequent. The *cause* of the new sensation, which is thus believed to be something different from our sentient self, is regarded by us as something which *has parts*, and which *resists our effort*, that is to say, as an external *body*;—because the muscular feeling, excited by the object grasped, is, in the *first* place, the very

feeling of that which we term resistance; and, *secondly*, because, by uniformly supplying the place of a definite portion of a progressive series of feelings, it becomes ultimately representative of that particular length of series, or number of parts, of which it thus uniformly supplies the place. Perception, then, even in that class of feelings by which we learn to consider ourselves as surrounded by substances extended and resisting, is only another name, as I have said, for the result of certain *associations* and *inferences* that flow from other more general principles of the mind; and with respect to all our other sensations, it is only another name for the *suggestion* of these *very perceptions of touch*, or at least of the feelings, tactual and muscular, which are, by Dr Reid, ascribed to that single sense. If we had been unsusceptible of these tactual and muscular feelings, and, consequently, had never conceived the existence of any thing extended and resisting *till* the sensation of fragrance, colour, sweetness, or sound had arisen, we should, after any one or all of these sensations, have still known as little of *bodies* without, as if no sensation whatever had been excited.

The distinction, then, on which Dr Reid has founded so much, involves, in his view of it, and in the view that is generally taken of it, a false conception of the nature of the process which he describes. The two words *sensation* and *perception*, are, indeed, as I have already remarked, very convenient for expressing, in one case, the mere existence of an

external feeling,—in the other case, the reference which the percipient mind has made of this feeling to an external cause. But this reference is not, which *the perception* superadds to the *sensation*;—and the source of the reference itself we are still left to seek, in the other principles of our intellectual nature. We have no need, however, to invent a peculiar power of the mind for producing it; since there are other principles of our nature, from which it may readily be supposed to flow,—the principle by which we are led to believe, that every new consequent, in a train of changes, must have had a new antecedent of some sort in the train,—and the principle of association, by which feelings, that have usually coexisted, suggest or become representative of each other. With these principles, it certainly is not wonderful, that when the fragrance of a rose has uniformly affected our sense of smell, as often as the flower itself was presented to us, we should ascribe the fragrance to the flower which we have seen and handled;—but though it would not be wonderful, that we should make it, it *would indeed* be wonderful, if, with these principles, we *did not* make that very reference, for which Dr Reid thinks it necessary to have recourse to a peculiar faculty of perception.

Such, then, is the view, which I would take of that distinction of *sensation* and *perception*, which Dr Reid, and the philosophers who have followed him, and many of the philosophers, too, that preceded him,—for the distinction, as I have said, is far

from being an original one,—have understood in a *different* sense; in consequence, as I cannot but think, of a defective analysis of the mental process, which constitutes the *reference* of our feelings of this class to *causes* that are *without*.

There is another distinction, which he has adopted from the philosophers that preceded him, and which forms an important part of his system of perception,—a distinction, that is just to a certain extent,—though not to the full extent, and in the precise manner, in which he and other writers have maintained;—and with respect to which, therefore, it will be necessary to point out to you, how far I conceive it to be safely admissible. I allude to the division, which has been formed of the *primary* and *secondary* qualities of matter.

"Every one knows that extension, divisibility, figure, motion, solidity, hardness, softness, and fluidity, were by Mr Locke called *primary qualities of body*; and that sound, colour, taste, smell, and heat or cold, were called *secondary qualities*. Is there a just foundation for this distinction? Is there any thing common to the primary, which belongs not to the secondary? And what is it?

"I answer, That there appears to me to be a real foundation for the distinction; and it is this: That our senses give us a direct and a distinct notion of the primary qualities, and inform us what they are in themselves; but of the secondary qualities, our senses give us only a relative and obscure notion. They inform us only, that they are qualities that

affect us in a certain manner, that is, produce in us a certain sensation; but as to what they are in themselves, our senses leave us in the dark.

"The notion we have of primary qualities is direct, and not relative only. A relative notion of a thing, is, strictly speaking, no notion of the thing at all, but only of some relation which it bears to something else.

"Thus gravity sometimes signifies the tendency of bodies towards the earth; sometimes it signifies the cause of that tendency: When it means the first, I have a direct and distinct notion of gravity: I see it, and feel it, and know perfectly what it is; but this tendency must have a cause: We give the same name to the cause; and that cause has been an object of thought and of speculation. Now what notion have we of this cause, when we think and reason about it? It is evident, we think of it as an unknown cause, of a known effect. This is a relative notion, and it must be obscure; because it gives us no conception of what the thing is, but of what relation it bears to something else. Every relation which a thing unknown bears to something that is known, may give a relative notion of it; and there are many objects of thought, and of discourse, of which our faculties can give no better than a relative notion.

"Having premised these things to explain what is meant by a relative notion, it is evident, that our notion of primary qualities is not of this kind; we know what they are, and not barely what relation they bear to something else.

"It is otherwise with secondary qualities. If you ask me, what is that quality or modification in a rose which I call its smell, I am at a loss to answer directly. Upon reflection I find, that I have a distinct notion of the sensation which it produces in my mind. But there can be nothing like to this sensation in the rose, because it is insentient. The quality in the rose is something which occasion the sensations in me; but what that something is, I know not. My senses give me no information upon this point. The only notion, therefore, my senses give is this, That smell in the rose is an unknown quality or modification, which is the cause or occasion of a sensation which I know well. The relation which this unknown quality bears to the sensation with which nature hath connected it, is all I learn from the sense of smelling; but this is evidently a relative notion. The same reasoning will apply to every secondary quality.

"Thus I think it appears, that there is a real foundation for the distinction of primary from secondary qualities; and that they are distinguished by this, that of the primary we have by our senses a direct and distinct notion; but of the secondary only a relative notion, which must, because it is only relative, be obscure; they are conceived only as the unknown causes or occasions of certain sensations with which we are well acquainted."*

Though, as I have explained to you fully, in my former Lectures, we should not,—at least in far the

* On the Intellectual Powers, Essay II. c. 17.

greater number of our sensations,—have considered them, originally, as proceeding from *external causes*, we yet, after the acquisitions of knowledge, with which the first years of our life enrich us, believe, that there is an external cause of all our sensations, —of smells and tastes, as much as of those feelings of the mind, which constitute our notions of extension and resistance. But the difference, in these cases, is, that though we *learn*, by experience of certain successions or coexistences of feelings, to refer to a *corporeal* cause our sensations of fragrance, and various other species of sensations, there is nothing in the sensation of fragrance itself, or in the other analogous sensations, of which I speak, that might not indicate as much a cause directly spiritual, as a cause like that to which we at present give the name of *body*,—while the very notion of *extension* and *resistance* combined, seems necessarily to indicate a material cause, or rather is truly that which constitutes our very notion of *matter*.

We believe, indeed, that our sensations of *fragrance, sweetness, sound*, have *causes of some sort*, as truly as we believe, that our feelings of *extension* and *resistance* have a cause, or causes of some sort; but if we have previously given the name of matter, with direct reference to the *one* set of effects, and *not with* direct reference to the other, it necessarily *follows*, that, in relation to matter, as often as we speak or think of it, the qualities which correspond with the one set of effects, that have led us to use that name, must be regarded by us as primary, and the others, which may, or may not coexist with these,

only as secondary. An external *body* may, or may not be fragrant, because fragrance is not one of the qualities previously included by us in our definition of a *body*; but it *must* be *extended*, and present an obstacle to our compressing force, because these *are* the very qualities, which we *have* included in our definition, and without which, therefore, the definition must cease to be applicable to the thing defined.

If, originally, we had invented the word *matter* to denote the cause, whatever it might be, of our *sensations* of *smell*, it is very evident, that *fragrance* would then have been to us the primary quality of *matter*, as being that which was essential to our definition of matter,—and all other qualities, by which the cause of smell might, or might not at the same time affect our other senses, would then have been *secondary* qualities only,—as being qualities compatible with our definition of matter, but not *essential* to it.

What we now term matter, however, I have repeatedly observed,—is that which we consider *as occupying space, and resisting our effort to compress it*;—and those qualities of matter may well be said to be primary, by which matter itself, as thus defined, becomes known to us,—or by the union of which, in our conception, we form the complex notion of matter, and give or withhold that name according as these qualities are present or absent. *Extension* and *resistance* are the distinguishing qualities that direct us in all our applications of the word which comprehends them. They are truly *primary* qualities, therefore; since, without our consideration

of them, we never could have formed the complex notion of the substance itself, to which we afterwards, in our analysis of that complex notion, ascribe them separately as qualities;—and all the other qualities, which we may afterwards find occasion to refer *to an extended resisting substance*, must evidently be *secondary*, in reference to those qualities, without which, as previously combined in our thought, we could not have had the primary notion of the substance to which we thus secondarily refer them. If, in the case which we have already frequently imagined, of the single sense of smell, we had been absolutely unsusceptible of every other external feeling, we might, indeed, have considered our sensation as the effect of *some* cause,—and even of a cause that was different from our mind itself; but it is very evident that we could not have considered it as the effect of the presence of *matter*, at least as that term is now understood by us. If, in these circumstances,—after frequent repetition of the fragrance, as the only quality of bodies with which we could be acquainted,—we were to acquire in an instant all the other senses which we now possess,—so as to become capable of forming that *complex notion of things extended and resisting*, which is our present notion of matter, we should then, indeed, have a fuller notion of the rose, of the mere fragrance of which we before were sensible, without knowing of what it was the fragrance, and might *learn* to refer the fragrance *to the rose*, by the same coexistences of sensations which have led us, in our present circumstances, to combine the fragrance with

other qualities, in the complex conception of the flower. Even then, however, though the fragrance, which was our first sensation, had truly been known to us before the other qualities, and though the sensation, therefore, would deserve the name of primary, the *reference* of this earlier feeling to the external rose as its cause, would still truly be *secondary* to the earlier reference, or rather to the earlier *combination* of *other* qualities, in one complex whole, by which we had formed to ourselves the notion of the extended and resisting rose, as a body, that admitted the subsequent reference of the delightful sensation of fragrance to be made to it, as the equal cause of these different effects.

In this sense, then, the distinction of the primary and secondary qualities of matter is just,—that, whatever qualities we refer to a *material* cause *must* be, in reference, secondary to those qualities that are essential to our very notion of the body, to which the *subsequent* reference of the other qualities is made. We have formed our definition of matter; and, as in every other definition of every sort, the qualities included in the definition, must always, in comparison of other qualities, be primary and essential, relatively to the thing defined.

Nor is this all.—It will be admitted likewise, that the qualities termed *primary*,—which alone are included in our general definitions of matter, and which are all, as we have seen, modifications of mere extension and resistance, are, even after we have learned to consider the causes of *all* our sensations as substances external to the mind, still felt by us

to be external, with more clearness and vividness than the *other* qualities, which we term *secondary*. The difference is partly, and chiefly, in the nature of the sensations themselves, as already explained to you, but depends also, I conceive, in no inconsiderable degree, on the permanence and universality of the objects which possess the primary qualities, and the readiness with which we can renew our feeling of them at will, from the constant presence of our own bodily frame, itself extended and resisting, and of the other causes of these feelings of extension and resistance, that seem to be every where surrounding us. *Tastes*, *smells*, *sounds*,—even colours, though more lasting than these—are not always before us; —but there is not a moment at which we cannot, by the mere stretching of our hand, produce at pleasure the feeling of something extended and resisting. It is a very natural effect of this difference, that the one set of causes which are always before us, should seem to us, therefore, peculiarly permanent, and the other set, that are only occasionally present, should seem almost as fugitive as our sensations themselves.

In these most important respects, there *is*, then, a just ground for the distinction of the primary from the secondary qualities of bodies. They are primary in the order of our definition of matter; and they are felt by us as peculiarly permanent, independently of our feelings, which they seem at every moment ready to awake. The power of affecting us with smell, taste, sight, or hearing, may or may not be present; but the power of exciting the feelings of

extension and resistance is constantly present, and is regarded by us as essential to our very notion of matter,—or, in other words, we *give* the name of *matter*, only where this complex perception is excited in us. We seem, therefore, to be constantly *surrounded* with a material world of substances extended and resisting, that is to say, a world of substances capable of exciting in us the feelings which are ascribed to the primary quality of matter;—but still the feeling of these primary qualities, which we regard as permanent, is *not* less than the feeling of the secondary qualities, a state or affection of the mind, and nothing more;—and in the one case, *as much as in the other*, in the perception of the qualities termed secondary, as much as of the qualities termed primary, the feeling, when it occurs, is the direct or immediate result of the presence of the external body with the quality of which it corresponds;—or, if there be any difference in this respect, I conceive that our feeling of fragrance, or sweetness, was, originally at least, a more immediate result of the presence of odorous or sapid particles,—than any *feeling of extension*, without the mind, was the effect of the first body which we touched.

To the extent which I have now stated, then, the *difference* of these classes of qualities may be admitted. But as to the other differences asserted, they seem to be founded on a false view of the nature of perception. I cannot discover any thing in the sensations themselves, corresponding with the primary and secondary qualities, which is direct, as Dr Reid says, in the one case, and only relative in the other.

All are *relative*, in his sense of the term, and *equally* relative,—our perception of extension and resistance, as much as our perception of *fragrance* or *bitterness*. Our feeling of extension is not itself *matter*, but a feeling excited by matter. We ascribe, indeed, our sensations as effects, to external objects that excite them; but it is only by the medium of our *sensations* that these, in any case, become known to us as objects. To say that our perception of extension is not *relative*, to *a certain external cause of this perception, direct or indirect*, as our perception of fragrance is relative to a certain external cause, would be to say that our perception of extension, induced by the presence of an external cause, is not a *mental* phenomenon, as much as the perception of fragrance, but is something *more* than a state of the mind; for, if the *perception of extension* be, as *all* our perceptions and other feelings must surely be, a *mental* phenomenon, a state of *mind*, not of *matter*, the reference made of this to an external cause, must be only to *something* which is conceived *relatively* as the cause of this feeling. What matter is independently of our perception, we know not, and cannot know, for it is only by our sensations that we can have any connexion with it; and even though we were supposed to have our connexion with it enlarged, by various senses additional to those which we possess at present, and our acquaintance with it, therefore, to be far more minute, this very knowledge, however widely augmented, must itself be a *mental phenomenon*, in like manner, the reference of which, to matter, as an external cause, would still

be *relative* only like our present knowledge. That the connexion of the feeling of extension, with a corporeal substance really existing without, depends on the arbitrary arrangement made by the Deity; and that all of which we are conscious might, therefore, have existed, as at present, *though no external cause had been*, Dr Reid, who ascribes to an intuitive principle, our belief of an external universe, virtually allows; and this very admission surely implies, that the notion does not, directly and necessarily, involve the existence of any particular cause, whatever it may be in itself, by which the Deity has thought proper to produce the corresponding feeling of our mind. It is quite evident, that we cannot, in this case, appeal to experience, to inform us what sensations or perceptions are more or less direct; for experience, strictly understood, does not extend beyond the feelings of our own mind, unless in this very relative belief itself, that there are certain external causes of our feelings,—causes which it is impossible for us not to conceive as really existing, but of which we know nothing more than that our feelings, in all that wide variety of states of mind, which we express briefly by the terms sensation or perception, are made to depend on them. In the series of states in which the mind has existed, from the first moment of our life, to the present hour, the feelings of extension, resistance, joy, sorrow, fragrance, colour, hope, fear, heat, cold, admiration, resentment, have often had place; and some of these feelings, it has been impossible for us not to ascribe to a direct external cause; but there have not been in the mental series, which is all of which we can be conscious,

both that feeling of the mind, which we term the perception of extension, and also body itself, as the cause of this feeling; for body, as an actual substance, cannot be a part of the consciousness of the mind, which is a different substance. It is sufficient for us to believe, that there are external causes of this feeling of the mind, permanent and independent of it, which produce, in regular series, all those phenomena that are found by us in the physical events of the universe, and with the continuance of which, therefore, our perceptions also will continue; we cannot truly suppose more, without conceiving our very notion of extension, a mental state, to be itself a body extended, which we have as little reason to suppose, as that our sensation of fragrance, another mental state, is itself a fragrant body. It is needless to prolong this discussion, by endeavouring to place the argument in new points of view. The simple answer to the question, "*Is* our notion of extension, or of the other primary qualities of matter, a phenomenon or affection of *matter* or of mind?" would be of itself sufficient; for if it be a state of the *mind*, as much as our feeling of heat or of fragrance, and a state produced by the presence of an external cause, as our sensations of heat or fragrance are produced, *then* there is no reason to suppose, that the knowledge is, in one case, more direct than in the other. In both, it is the effect of the presence of an external cause, and in both it must be *relative only*,—to adopt Dr Reid's phrase,—to that particular cause which produced it; the knowledge of which cause, in the case of *extension*, as much as in the case of *fragrance*, is nothing more than the

knowledge, that there is, *without* us, something which is not our mind itself, but which exists, as we cannot but believe, permanently, and independently of our mind, and produces, according to its own varieties, in relation to our corporeal frame, at the time, that affection of the mind which we denominate the perception of extension; at another time, that different affection of the mind, which we denominate the perception of fragrance. *What it is*, as it exists in absolute independence of our perceptions, we who become acquainted with it, only by those very perceptions, know not, in either case; but we know it at least,—which is the only knowledge important for us,—as it exists *relatively* to *us;* that is to say, it is impossible for us, from the very constitution of our nature, not to regard the variety of our perceptions, as occasioned by a corresponding variety of causes, external to our mind; though, even in making this reference, we must still believe our *perceptions themselves*, to be altogether different and distinct from the external causes, whatever they may be, which have produced them; to be, in short, phenomena purely *mental*, and to be this *equally*, whether they relate to the primary or the secondary qualities of matter; our notion of extension, in whatever way the Deity may have connected it with the presence of external things, being as much a state of the mind itself, as our notion of sweetness or sound.

These observations, on the process of suggestion, which, in the reference to an external cause, distinguishes our *perceptions* from our *simpler sensations*, —and on the real and supposed differences of the

primary and secondary qualities of matter,—will have prepared you, I trust, for understanding better the claim which Dr Reid has made to the honour of overthrowing what he has termed the ideal system of perception. It is a claim, as I have said, which appears to me truly wonderful, both as made by him and admitted by others; the mighty achievement which appeared to him to be the overthrow of a great system, being nothing more, than the proof that certain phrases are metaphorical, which were intended by their authors to be understood only as metaphors.

In perception there is, as I have already frequently repeated, a certain *series*—the *presence of an external object*—the *affection of the sensorial organ*—the *affection of the sentient mind.* As the two last, however, belong to *one being*—the being called *self*—which continues the *same*, while the external objects around are incessantly changing;—it is not wonderful, that, in speaking of perception, we should often think merely of the object as *one*, and of our*self*, (this compound of mind and matter,) as also *one*,—uniting the *organic* and *mental* changes, in the single word which expresses our *perception.* To *see* and to *hear*, for example, are single words, expressive of this whole process—the *bodily* as well as the *mental* part—for we do not consider the terms as applicable, in strict philosophic propriety, to cases, in which the mere mental affection is the same, but the corporeal part is believed by us to be different,—as in sleep, or reverie, when the castle, the forest, the stream, rise before us as in reality, and we feel,

as if we were truly listening to voices which we love. That we feel, *as if* we were listening, and feel *as if* we saw, is our language, when, in our waking hours, we speak of this phenomena of our dreams,—not that we actually *saw* and *heard*—thus evidently shewing, that we comprehend, in these terms,—when used without the qualifying words *as if*—not the *mental changes of state* only, but the whole process of perception, corporeal as well as mental. The mere *organic* part of the process, however, being of importance, only as it is followed by the *mental* part,—and being always followed by the mental part,—scarcely enters into our conception, unless in cases of this sort, when we distinguish *perception* from *vivid imagination*, or when the whole *compound process of perception* is a subject of our philosophic inquiry. As *sight, hearing, perception*, involve, in a single word,—process both *mental* and *corporeal*,—so, I have no doubt, that *idea*, though now confined more strictly to the *feelings of the mind*, was long employed with a more vague signification, so as sometimes to mean the *mental* affection, sometimes the *organic* affection, sometimes *both*;—in the same manner, as at present we speak of *sight*, sometimes as *mental*, sometimes as *organic*, sometimes as *both*. It comprehends *both*, when we distinguish the mountain or forest which we *see*, from the mountain or forest of which we *dream*. It is *mental* only, when we speak of the *pleasure of sight*. It is organic only, when we say of an *eye*, in which the passage of the rays of light has become

obstructed, that its *sight* is lost, or has been injured by disease.

The consideration of this double sense of the term *idea*, in some of the older metaphysical writers, corresponding with our present double sense of the word perception, as involving both the corporeal and mental part of the process, removes, I think, much of that apparent confusion, which is sometimes to be found in their language on the subject; when they combine with the term expressions, which can be understood only in a *material* sense, after combining with it, at other times, expressions, which can be understood only of the *mind*; as it is not impossible that a period may arrive, when much of *our* reasoning, that involves no obscurity at present, may seem obscure and confused, to our successors, in that career of inquiry, which, perhaps, is yet scarcely begun; merely because *they* may have *limited*, with stricter propriety, to *one part* of a process, terms which *we* now use as significant of a whole process. In the same manner, as we now exclude wholly from the term *idea* every thing *organic*,—so may every thing organic hereafter be excluded from the term *sight*; and from the simple phrase, so familiar at present, that an eye has lost its sight, some future philosopher may be inclined to assert, that we, who now use that phrase, consider the perception of *vision*, as *in* the *material organ*; and, if he have the talents of Dr Reid, he may even form a series of admirable ratiocinations, in disproof of an opinion which nobody holds, and may consider himself, and perhaps, too, if he be as fortunate as the author of the In-

quiry into the Human Mind, may be considered, by others, as the overthrower of a mighty system of metaphysical illusion.

How truly this has been the case, in the supposed overthrow of the ideal system, I shall proceed to shew in my next Lecture.

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